



website: <http://biz.LGservice.com>
e-mail: <http://www.LGservice.com/techsup.html>

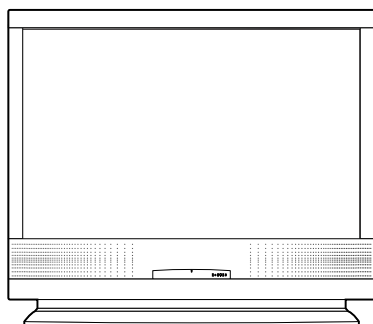
LCD Projection Monitor SERVICE MANUAL

CHASSIS : RE-01JB

MODEL : MW-60SZ12

CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



Contents

Contents	2
Safety Precautions	3
Servicing Precautions	4
Electrostatically Sensitive (ES) Devices	4
Description of Controls	5
Adjustment Instructions	9
Correction of Screen Tilt & Keystone	13
Replacing the Lamp	16
Description of each Block Circuits	17
Description of Micom	25
Block Diagram	33
Exploded View	34
Exploded View Parts List	35
Replacement Parts List	36
Schematic Diagram	

Safety Precautions

1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assemblies in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks.

Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

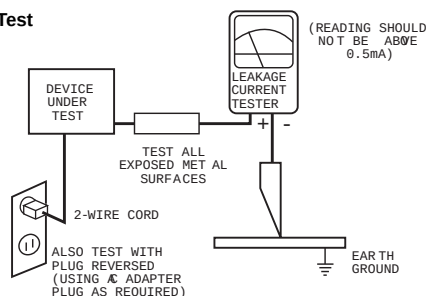
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet back, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

- c. **Antenna Cold Check**-With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

- d. **Leakage Current Hot Check**-With the instrument completely reassembled, plug the AC line cord directly into a 120 V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat the test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER.

AC Leakage Test



- e. **X-Radiation and High Voltage Limits**-Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place.

High voltage must be measured each time servicing is done that involves B+, horizontal deflection, or high voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold-down.") Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit specifications given on instrument labels and in the **Product Safety & X-radiation Warning** note on the service data chassis schematic.

High voltage is maintained within specified limits by close-tolerance safety-related components/adjustments in the high-voltage circuit.

If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning**- Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you, the servicer responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning**-The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type and number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.

5. **Hot Chassis Warning**-a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0 V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. b. Some TV receiver chassis normally have 85 V AC (RMS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts- be sure that leads and components do not touch, c. the AC supply, d. high voltage, and e. antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed circuit board. Check the AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. PRODUCT SAFETY NOTICE

Some electrical and mechanical parts have special safety related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by shading, by a * , or by Δ on schematics and parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement parts might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

Servicing Precautions

CAUTION: Before servicing instruments covered by this service manual and its supplements, read and follow the **SAFETY PRECAUTIONS** section of this manual. Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. a. Always unplug the instrument AC power cord from the AC power source before: (1) removing or reinstalling any component, circuit board, module, or any other instrument assembly. (2) disconnecting or reconnecting any instrument electrical plug or other electrical connections. (3) connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
Caution: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
- b. Do **not** defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
- c. Do **not** apply AC power to this instrument and/or any of its electrical assemblies unless **all** solid-state device heat sinks are correctly installed.
- d. Always connect a test instrument's ground lead to the instrument chassis ground **before** connecting the test instrument positive lead.
Always remove the test instrument ground lead last.

Note: Refer to the Safety Precautions section of this manual.

2. The service precautions are indicated or printed on the cabinet, chassis, or components. When servicing, follow the printed or indicated service precautions and service materials.

3. The components used in the unit have a specified flame resistance and dielectric strength. When replacing any components, use components which have the same ratings. Components identified by shading, by *****, or by **Δ** in the circuit diagram are important for safety or for the characteristics of the unit. Always replace with the exact replacement components.

4. An insulation tube or tape is sometimes used and some components are raised above the printed wiring board for safety. The internal wiring is sometimes clamped to prevent contact with heating components. Install them as they were.

5. After servicing, always check that the removed screws, components, and wiring have been installed correctly and that the portion around the service part have not been damaged. Further, check the insulation between the blades of the attachment plug and accessible conductive parts.

INSULATION CHECKING PROCEDURE

Disconnect the attachment plug from the AC outlet and turn the power on. Connect the insulation resistance meter (500 V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1 Mohm.

Note: Accessible conductive parts include metal panels, input terminals, ear-phone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on the body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material.)

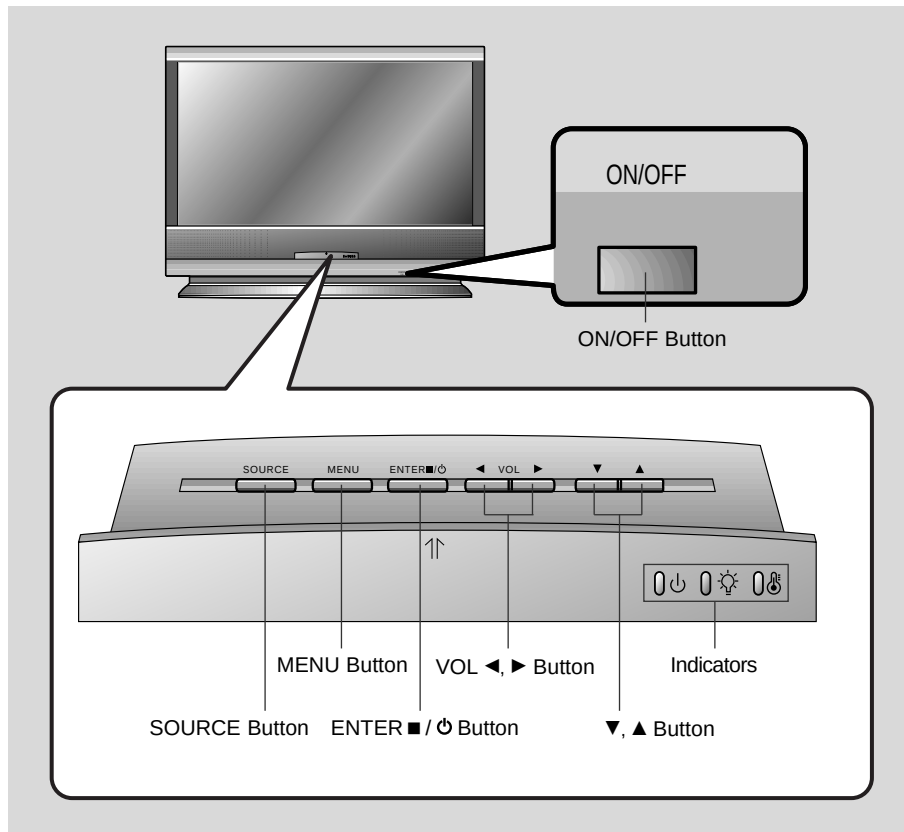
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise, seemingly harmless motion, such as the brushing together of your clothing or the lifting of your foot from a carpeted floor, can generate static electricity sufficient to damage an ES device.)

Description of Controls

Main Body

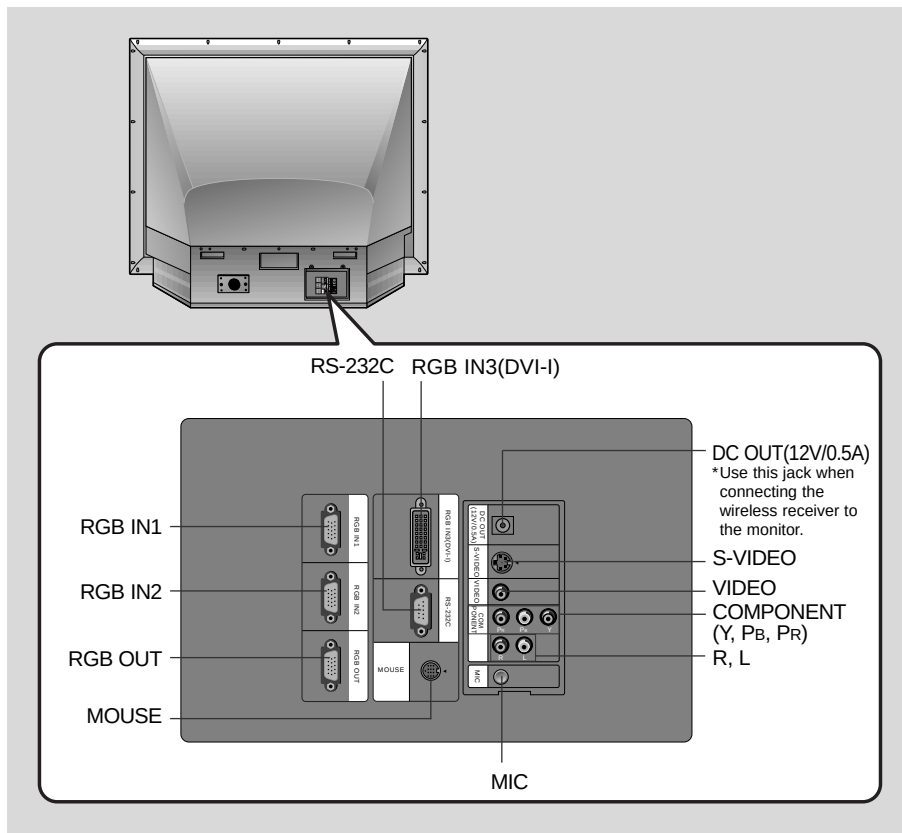


* Temperature indicator, lamp Indicator and operation indicator at the front of the monitor show the user the operating status of the monitor.

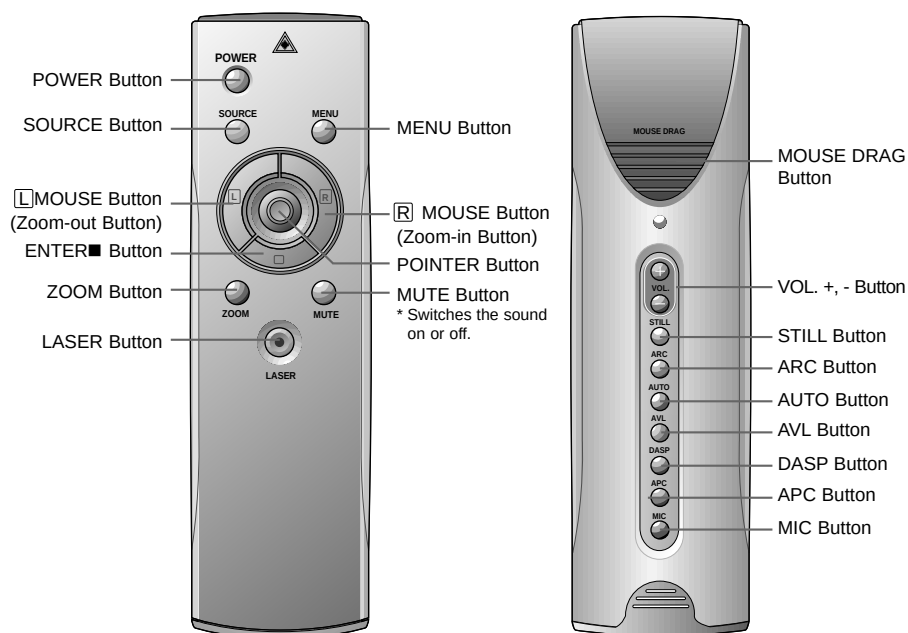
Operation Indicator	Orange	Standby.
	Green(flashing)	Lamp cooling untill the lamp turn on. (for 25 seconds)
	Green	On operation.(Turn on the lamp)
	Orange(flashing)	Monitor lamp is cooling as power out(1 minutes)
	Off	Power off.
Lamp Indicator	Red	Monitor lamp is reaching the end of its life and needs to be replaced with a new lamp.(over 10000 hours) "Replace the Lamp"
	Red(flashing)	The monitor has trouble in the lamp or around it. Contact the service center.
	Green(flashing)	The lamp cover is not closed.
Temperature Indicator	Red	The monitor is turned off due to its high temperature. Contact your service center.
	Red(flashing) Green(flashing)	Power has turned off due to problem with the internal cooling fans. Contact your service center.

" " is the warning message on screen.

Rear Connecting Part



Remote Control

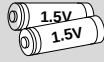


Button	Function
POWER Button	Selects ON/OFF of power.
SOURCE Button	Switches to RGB1/2/3, Video, S-Video, Component mode.
MENU Button	Displays or hides the menu.
L MOUSE Button (Zoom-out Button)	* Corresponds to the Left - Click of PC Mouse. * Downsizes the screen on the zoom function.
R MOUSE Button (Zoom-in Button)	* Corresponds to the Right - Click of PC Mouse. * Enlarges the screen size on zoom function.
POINTER Button	* After selecting menus, controls selecting and adjusting functions with the direction of up, down, left, right. * Moves the screen with the direction of up, down, left, right on zoom function. * Moves and releases the selected icon on PC screen.
MOUSE DRAG Button	Uses to select and drag an icon in PC mode.
ENTER ■ Button	Checks the present mode and sets the change of functions.
ZOOM Button	
MUTE Button	Cuts off audio.
VOL.(+, -) Button	Adjusts volume level.
STILL Button	
ARC Button	
AUTO Button	
AVL Button	
DASP Button	
APC Button	
MIC Button	
LASER Button	Projects a bright red laser point on to the screen for indication purposes. (Don't look at laser beam directly as it will cause eye damage.)

Accessories



Remote Control



Batteries 2 (size AA)



Audio/Video Cable



DVI cable



Computer Cable



Operating guide

Mouse Connecting Cables



PS/2 Mouse Cable
(IBM PC or Compatible)



MAC Serial Mouse Cable

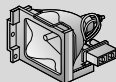
Optional Extras

* Contact your dealer for buying these items.

* Contact your dealer for replacing a new lamp.



S-Video Cable



Lamp

Adjustment Instructions

1. Application Object

This instruction is for the application to the LCD projection Monitor.

2. Notes

- (1) The power source insulation of this LCD Projection TV is not charging type and you may not use the transformer for insulation. But you better adjust the set after operating it with insulation transformer between power supply cable and input part of the set for protecting the adjusting equipment.
- (2) The adjustment must be performed under the correct sequence.
- (3) The adjustment must be performed in the circumstance of 25±5°C of temperature and 65±10% of relative humidity if there is no specific designation.
- (4) The input voltage of the receiver must keep 220V, 60Hz in adjusting.
- (5) The set must be operated for 5 minutes preliminarily before adjustment if there is no specific designation. The preliminary operation must be performed after receiving 100% white pattern, but reception of the moving picture may also be possible in unavoidable case.

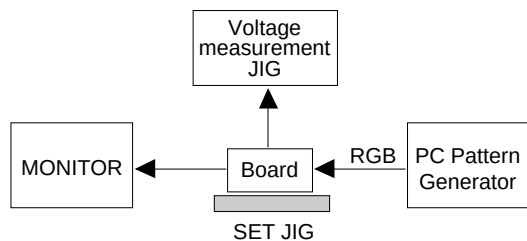
3. DRIVER Voltage Adjustment

All adjustment mode are entered by pressing the IN-START key on the remote control, after adjustment press the ENTER key to come out.

(1) Required Test Equipment

- 1) Output voltage measurement Jig : 1EA
- 2) PC Pattern generator : 1EA
- 3) A remote control for adjustment

(2) Setting of Devices



(fig. 1) Voltage adjustment Set

(3) Preparation for Adjustment

- 1) Connect the PC pattern Generator with the RE-01JB set as Fig.1
- 2) Adjust the PC pattern generator to XGA60Hz.
- 3) Press the INPUT SELECTION key(TV/AV) to select the RGB1 input.
- 4) Install the Main Board of RE-01JB to the set JIG.

(4) Sequence of Adjustment (VREF&VMID)

- 1) Turn the set on.
- 2) Use the IN-START key on the R/C for adjustment to select 'Drive LCCOM Adjust' in adjustment menu.

- 3) Adjust voltage of VREF and VMID for each R,G,B. (SEE a Table below)
- 4) Press the ENTER key on the R/C for adjustment to store the adjustment value when adjustment is finished.

	R	G	B	Adj.Value
VREF	IC1808 Pin 14			The minimum value which is over 9.5V
VMID	IC1808 Pin1			7.0V

4. EPLD Programming

(1) Required Test Equipment

- 1) Byteblaster
- 2) PC (or Notebook): 1EA
- 3) EPLD Program

(2) Sequence of Adjustment

- 1) Connect one port of Byteblaster to the Parallel Port and connect another port of Byteblaster to P1201 of Sound Board.
- 2) Turn the SET and PC on.
- 3) Operate an EPLD program of PC(or Notebook).

5. Signal adjustment of LCD control

5-1. LCCOM ADJUSTMENT

(1) Required Test Equipment

- 1) Pattern generator which can generate each R,G,B signal of fined horizontal bar pattern.
- 2) A remote control for adjustment : 1EA

(2) Sequence of Adjustment

- 1) Turn on the power supply of JIG for adjustment.
- 2) Adjust the PC pattern generator to XGA60Hz and fined horizontal bar pattern and then connect to the SET.
- 3) Press the INPUT SELECTION key on the R/C to select RGB.
- 4) Press IN-START key on the R/C for adjustment to enter adjustmet mode.
- 5) Select LCCOM adjustment menu.
- 6) Use the VOLUME key to make the fewest screen FLICKER with watching screen. (Adjust individually after inputting each RGB input signal.)
- 7) Press the ENTER key to come out of adjustment mode when adjustment is finished.

5-2. NRS ADJUSTMENT

(1) Required Test Equipment

- 1) PC Pattern generator : 1EA
- 2) A remote control for adjustment : 1EA

(2) Sequence of Adjustment

- 1) Turn the Power supply on.
- 2) Adjust the PC pattern generator to XGA60Hz and 16Gray pattern and then connect the PC pattern generator to SET.
- 3) Press the INPUT SELECTION key on the R/C to select RGB.

- 4) Press the IN-START key on the R/C for adjustment to enter adjustment mode.
- 5) Select NRS adjustment menu.
- 6) Use the VOLUME key to make the fewest vertical lines on the screen with watching screen.
- 7) Press the ENTER key to come out of adjustment mode when adjustment is finished.

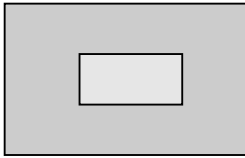
6. Factory Default&RGB Gain/Offset Adjustment

(1) Required Test Equipment

- 1) Pattern generator : 1EA
- 2) A remote control for adjustment : 1EA

(2) Sequence of Adjustment

- 1) Adjust the pattern generator to white/black window as Fig. Below and connect to RGB1 Input terminal of the set.
- 2) Select RGB1 as Input signal.
- 3) Press the IN-START key on the R/C for adjustment to enter adjustment mode and select Factory Default in adjustment mode.
- 4) Press the ENTER key to operate Factory Default and enter adjustment mode again and then select AutoGain in adjustment menu.
- 5) Press the ENTER key to operate AutoGain and press the Enter key to store AutoGain when adjustment is finished.



7. Screen Position Adjustment

(1) Required Test Equipment

- 1) Pattern generator : 1EA
- 2) A remote control for adjustment : 1EA

(2) Sequence of Adjustment

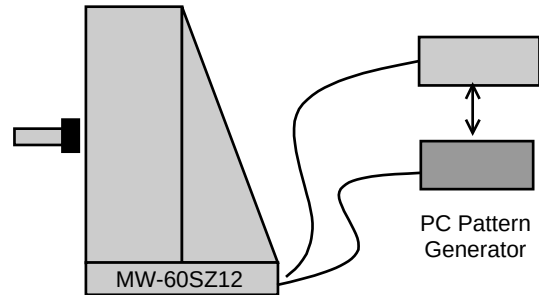
- 1) Connect a power source with TV Set and turn TV Set on.
- 2) Do heat run for 5 min and over before adjustment.
- 3) Input the farthest outer pattern signal into pattern generator except DTV signal (Hat or Hatch pattern which has the farthest line) and connect to RGB1 and then select Input signal of set to RGB1.
- 4) Press IN-START key on the remote control to enter the adjustment mode.
- 5) Select POSITION CONTROL of adjustment menu and then select the H POSITION in SUB Menu.
- 6) Adjust H-Position so that the farthest line is shown and to be symmetrical on the end of right/left screen.
- 7) Select the V POSITION in Menu.
- 8) Adjust V POSITION so that the farthest line is shown and to be symmetrical on the end of top/bottom screen.
- 9) When finishing the adjustment, get out of adjustment mode by pressing ENTER button on Remote Control.

7. White Balance & Gamma Adjustment

(1) Required Test Equipments

- 1) Illuminometer (name of model : CA-100) : 1EA → Measure color of projecting screen center
- 2) Pattern Generator : 1EA → 16 step Gray Pattern, 64 step Gray Pattern
- 3) A remote control for adjustment : 1EA

(2) Setting of Devices



7-1 Sequence of Gamma manually adjustment

- 1) Prepare the PC Pattern Generator which is possible to output R/G/B of 16 step and 64 step Gray Pattern.
- 2) Equipment composition : Follow Fig. 3.
- 3) Turn on the Jig for adjustment.
- 4) Select the RGB 1 by pressing the input select button on Remote Control.
- 5) Output the 16 Gray Pattern in PC Pattern Generator. Check it with the naked eye whether Screen Gamma and W/B is right about each Gray. If it's not, press the IN-START button on Remote Control and then adjust the level data of each step manually in sub menu of Gamma RGB.
- 6) Output the 64 Gray Pattern in PC Pattern Generator. Check it with the naked eye whether Screen Gamma and W/B is right about each Gray or whether there is Gamma noise. If there's any problem, press the IN-START button on Remote Control and then adjust the level data of each step manually in sub menu of Gamma RGB.
- 7) After finishing adjustment, exit adjustment mode by using ENTER button on Remote Control.

7-2 Sequence of Gamma Auto Adjustment

- 1) Display the biggest WHITE PATTERN on screen and change the 7050 R/G/B CONTRAST (or 16th Gamma 1 R/G/B) data value of adjustment mode so that the white balance of illumination system or illuminometer to be x:283, y: 297(D9300K).
- 2) Measure the luminance value with changed data value in clause 1.
- 3) Seek the luminance of each step so that each Gamma value of 16 step to be 2.5 curve on a basis of luminance value measured in clause 2. (Maximum luminance * (n1/16)** Maximum luminance : luminance measured in clause 2)
N 1 : Each step unit (1.2.3.4,-----15) when classify the signal level to 16 step.
- 4) Input the Gray pattern corresponding to the first luminance and change the first adjustment mode R/G/B data value so that the R/G/B data value to be same white balance with 1) above and luminance with 3) above.

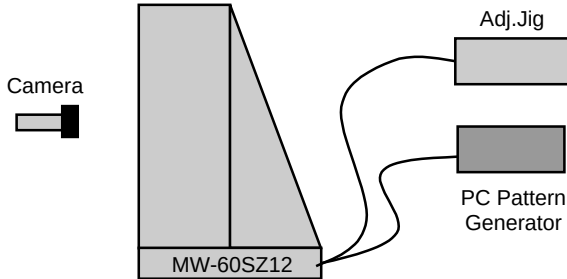
- 5) Input the Gray pattern corresponding to the second luminance and change the second adjustment mode R/G/B data value of Gamma adjustment item so that the R/G/B data value to be same white balance with 1) and right to the second luminance (measured in clause 3)
- 6) Input pattern signal with same method above and change the Gamma R/G/B data value of corresponding level and make same luminance with 3) and white balance with 1).

9. Uniformity Adjustment

(1) Required Test Equipments

- 1) Uniformity measurement equipment
- 2) A Remote Control for Adjustment
- 3) PC Pattern Generator : 1EA

(2) Setting of Devices



(3) Sequence of Adjustment

- 1) Adjust the screen coordinates as shown below.

0	1	2	3		xx		15	16
1								
.								
yy								
.								
11								
12								

- 2) Output the 17th VDP Test Pattern signal(7050 MAX 640) of No. 4 sub adjustment item maximum adjustment.
Read the white coordinates and communicate 3 line with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color uniformity of max point.
At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.
- 3) Output the 16th VDP Test Pattern signal(7050 MID 570) of No. 4 sub adjustment item(middle adjustment).
Read the white coordinates and communicate 3 line with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color uniformity of mid point.
At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.
- 4) Output the 15th VDP Test Pattern signal(7050 MIN 360) of No. 4 sub adjustment item(min adjustment).
Read the white coordinate and communicate with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color unifor-

mity of miner point.

At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.

- 5) White the miner, middle, maximum data for each point to confront to each MICOM address.

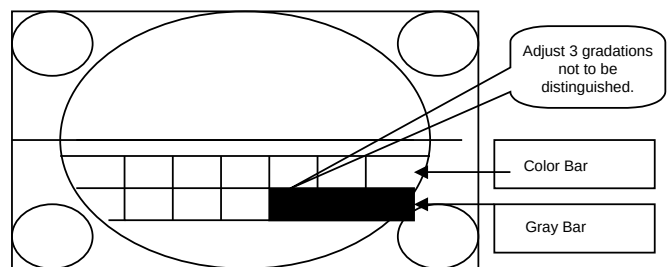
10. Video Gain Adjustment

(1) Required Test Equipments

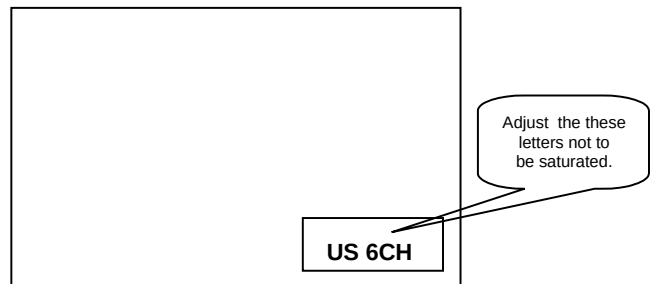
- 1) TV
- 2) A Remote Control for Adjustment

(2) Sequence of Adjustment

- 1) Press the INPUT SELECTION key on the R/C to select VIDEO input.
- 2) Input the NTSC 13CH signal into Video input.
- 3) Set the set input to video (AV input).
- 4) Press the IN-START key on R/C for adjustment to select '2101 Color Control1' in adjustment menu.
- 5) Raise the 2101 picture value to the maximum(63).
- 6) Use the 2101 subbright value and adjust upper 3 gradation of Gray bar not to be distinguished.



- 7) Set the video channel to NTSC 6CH.
- 8) Press the IN-START key on R/C for adjustment again to select '2101 Color Control1' in adjustment menu.
- 9) Raise the Driver G Gain to the maximum(63) and then stop the Driver G Gain when the US 6CH is visible.



- 10) Make the Driver B value same with Driver G value and make the Driver R value higher(2) than Driver G.
- 11) Press the ENTER key on R/C for adjustment to store the adjustment value when the adjustment is finished.

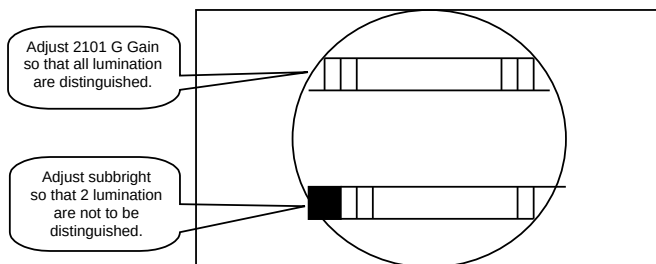
11. Component Gain Adjustment

(1) Required Test Equipments

- 1) Signal(DTV Signal 31-3)
- 2) SET-TOP box(or an equipment which can generate YPbPr output receiving DTV signal)
- 3) A Remote Control for Adjustment

(2) Sequence of Adjustment

- 1) Press the TV/AV key on the R/C for adjustment to select component input.
- 2) Input DTV signal 31-3 into component input.
- 3) Press the IN-START key on the R/C for adjustment to select '2101 color control1' in menu.
- 4) Raise the 2101 picture value to the maximum.
- 5) Use the 2101 subbright value and adjust lower 2 gradation of Gray bar not to be distinguished.
- 6) Press the IN-START key on R/C for adjustment again to select '2101 color control2' in adjustment menu.
- 7) Use the Driver G Gain and adjust 2101 G Gain so that all gradation(11gradation) of upper Gray bar are distinguished.



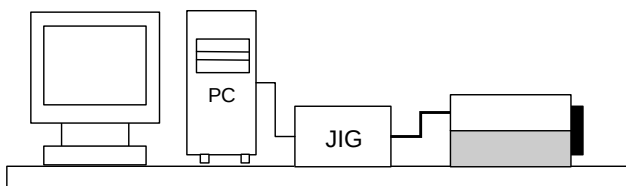
- 8) Make the Driver B value same with Driver G value and make the Driver R value higher(2) than Driver G.
- 9) Press the ENTER key on R/C for adjustment to store the adjustment value when the adjustment is finished.

12. EDID Data Input

(1) Required Test Equipments

- 1) A Jlg for adjusting PC,DDC.(PC serial to D-sub.connection equipment)
- 2) SW for writing DDC(EDID data write & read)
- 3) D-sub terminal
- 4) D-sub /DVI conversion connector

(2) Setting of Devices



(3) Preparation for Adjustment

- 1) Set devices as above and turn the PC,jig on.
- 2) Put the S/W for writing DDC(EDID datawrite&read)into operation.(Operated in DOS mode.)

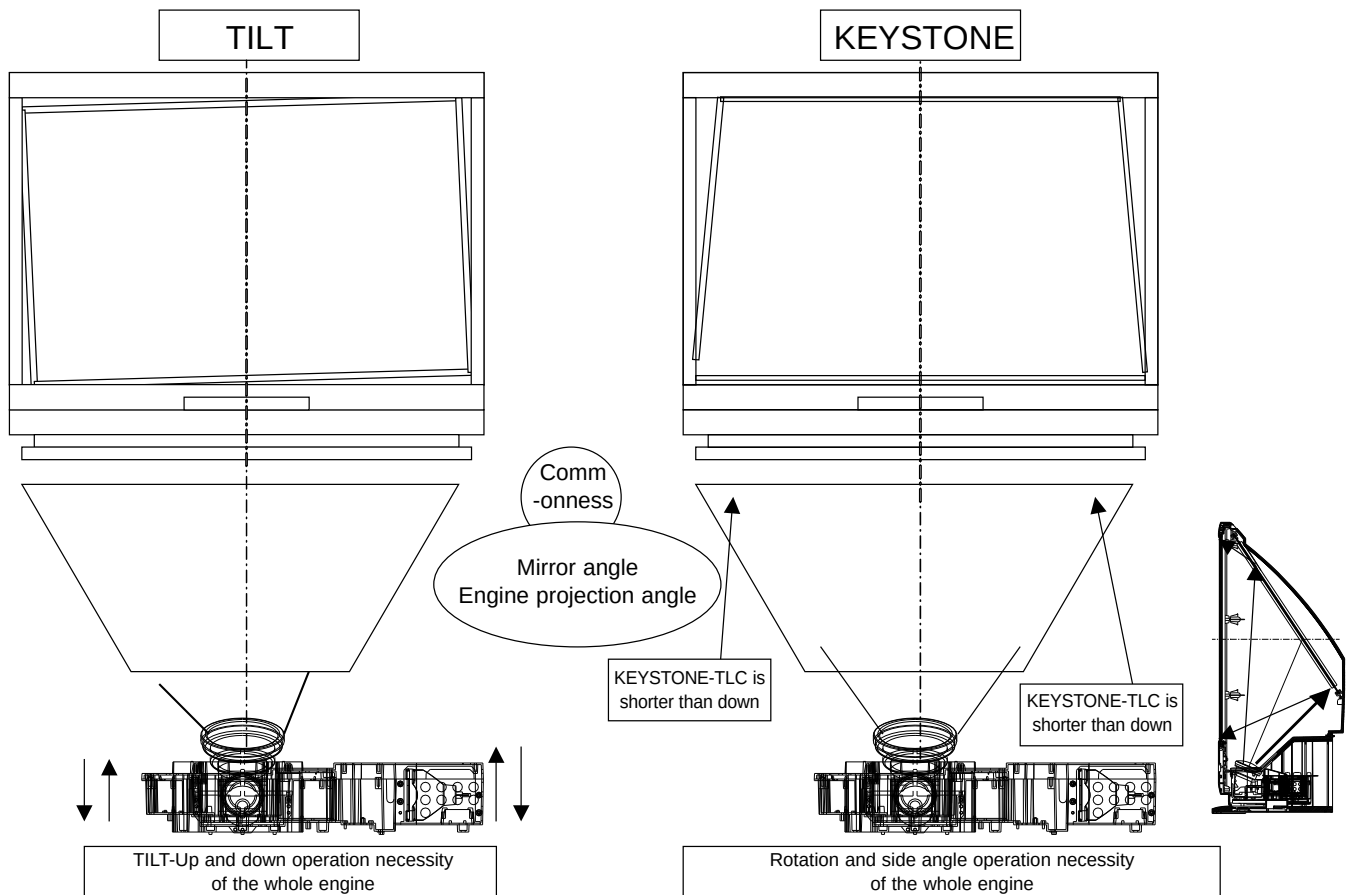
(4) Sequence of Adjustment

- 1) Turn the set on and set the input to RGB1 and then connect D-sub to RGB1 input terminal.
- 2) Input the product code, production week/year, serial number (if it is not input, write "01") to the S/W for writing DDC.
- 3) Select '60RPM_A' out of DDC file.
- 4) Operate the EDID write command and check the 60RPM_A is written well through the Read command.
- 5) Connect the DVI conversion connector to D-sub and RGB3(DVI) input terminal of set.
- 6) Set the Input selection to RGB3.
- 7) Select '60RPM_D' out of DDC file.
- 8) Operate the EDID Write command and check the 60RPM_D is written well through the Read command.

Correction of Screen Tilt & Keystone

1. Screen Tilt and Keystone cause of occurrence

When the whole engine is leaned, Tilt occur and Keystone occur because of changing TCL when projection angle of engine is different or Mirror angle is different.

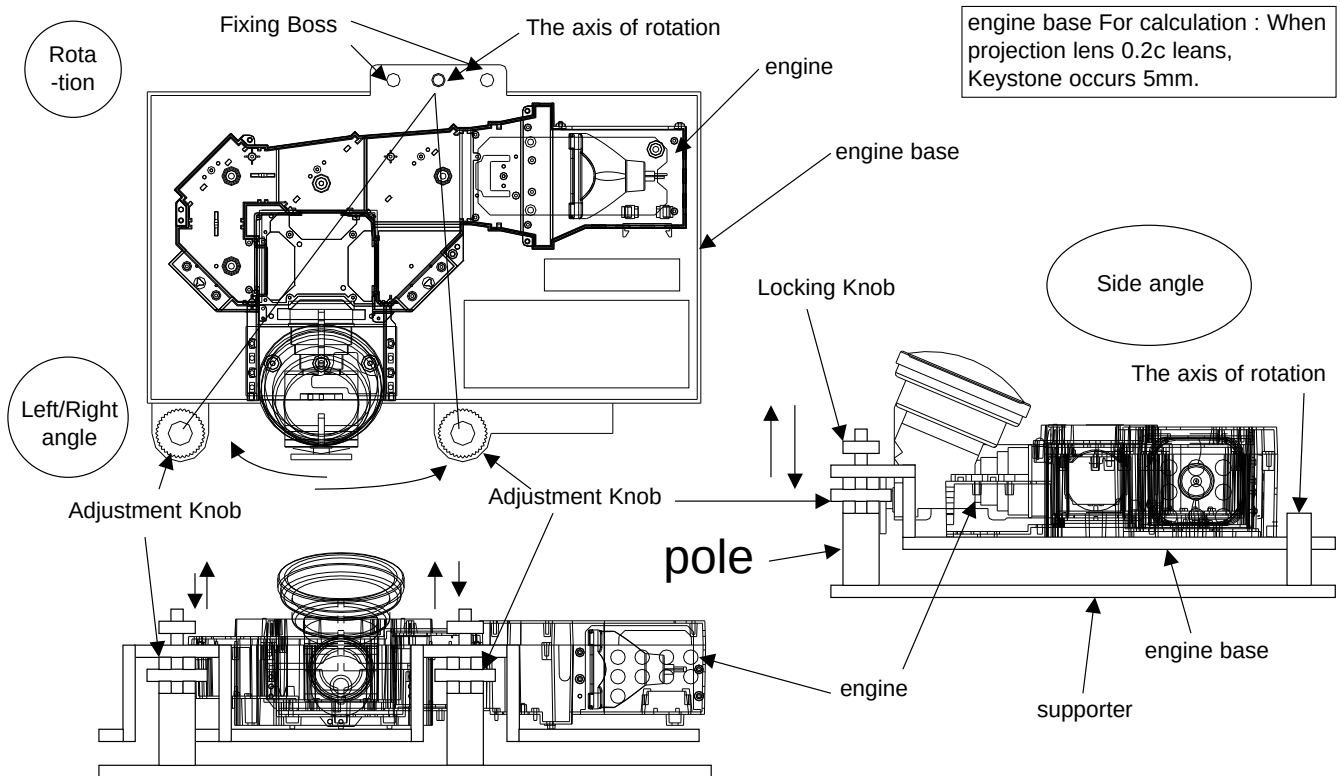


2. New Mechanism for Adjustment

The axis of rotation of engine sets back and the whole engine enable left and right rotation, up and down, left and right angle movement.

When turning adjustment Knob of left/right in front, engine will move.

When moving the engine base with left and right direction in front, engine will rotate.



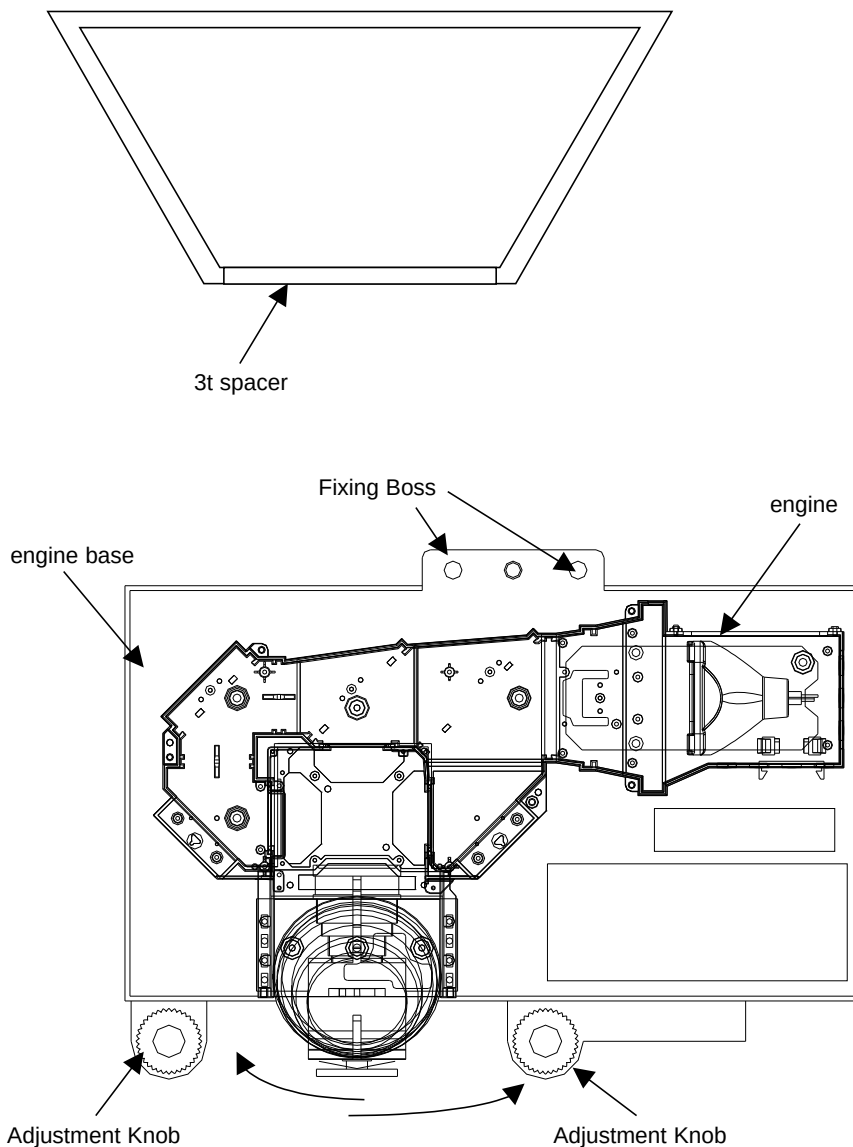
3. Working Method and Improvement for Correction Mechanism of Tilt and Keystone

3.1 Working Method

- (1) Put the 3t spacer on back of down parts of Mirror to correcting the Mirror angle of down parts
- To correct difference between Mirror angle of C/A and JIG angle of lighting parts.
- (2) Looking at the screen, push the engine base for left/right direction in front of engine. At this time, check the screen Keystone condition.
- (3) Adjust engine angle by turning the adjustment Knob on the down part.
- (4) If Tilt and Keystone is [MAX-MIN] # 4mm, lock the locking Knob of left/right in front part and then fix the fixing boss with screw.

3.2 Improvement

When turning left and right rotation, because an engine construction structure is tuched a construction structure of cabinet, shield case will be correction. When turning adjustment Knob, operation is bad because you can't input a hand to turning or adjustment Knob is tight. Continously consult with the production department for improving adjustment operation. (A special Driber for adjustment and so on)

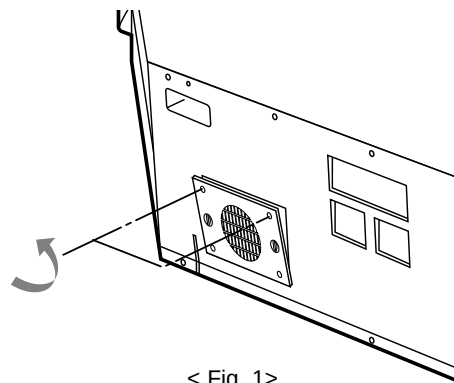


Replacing the Lamp

* Connect your dealer or LG service center for replacing of new lamp.

You must replace the lamp when:

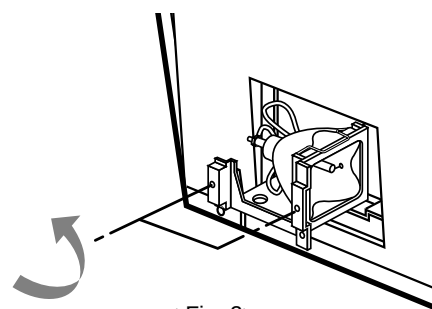
- The projector image get darker or start to be deteriorated.
- The lamp indicator is red (red, flashing alternately).
- The message "LAMP REPLACE" appears on the screen when turning the projector lamp on.



< Fig. 1 >

* Replace the lamp as below sequence

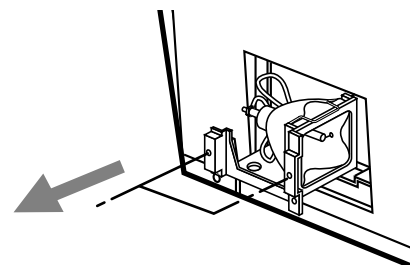
1. Turn off the projector and unplug the power cable.
(Cool the lamp for more than 1 hour.)
2. Remove the four retaining screws on the lamp cover with a screwdriver of "+" type and then lift off the lamp cover.
3. After lifting the lamp cover off, remove the two retaining screws on lamp case with screwdriver of "-" type. (refer to fig.2)
4. Lift up the fixed wire handle of the lamp. (refer to fig.3)
5. Pull out the handle slowly and remove the lamp case.
6. Insert the new lamp gently into the correct position. Make sure it is inserted correctly.
7. Tighten the screw you removed in step 3.
8. Replace the lamp cover and tighten the cover screws. (Make sure the lamp cover is securely fastened. If lamp cover is open, the lamp indicator flashes green and the projector is not turn on.)



< Fig. 2 >

* Resetting the lamp time

After pressing the "?" key on the remote control in Stand-By mode, press the "9876" and press the "OK" button.
And then three LED in the front is stop after flashing for a moment.



< Fig. 3 >

* Lamp Life Time Confirmation

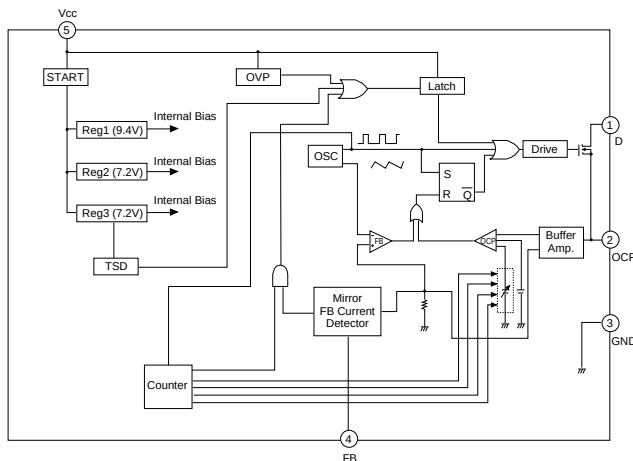
1. Method1 : Enter ADJ mode with using the remote control. You can be confirmed because " Lamp Life Time XX hr" is appeared.
2. Method2 : With using the remote control offered to consumer if you press the menu button continuously, OSD menus will disappear then press the "9876" and press the "OK" button to enter ADJ mode you can see "Lamp Life Time XX hr"

Description of each Block Circuits

1. Power Block

Circuit is to use the FLY BACK CONVERTER way for insulation basically and composed of HYBRID IC STR F6658B for switching power, which has a POWER MOSFET within, and STR G6153 as the circuit for stand-by. And it is operated by the ERROR AMP (IC802, SE105) which transfers electric signal in output part to the primary part with insulating primary and secondary part.

1.1 Block Diagram (STR F6668B)



1.2 Pin Description

No.	Symbol	Name	Function
1	O.C.P/F.B	Over-current /Feed-Back terminal	Input signal of detecting over-current & to input signal for controlling constant voltage.
2	S	Source terminal	MOSFET source
3	D	Drain terminal	MOSFET drain
4	Vin	Voltage input terminal	Input control circuit power
5	GND	Ground terminal	Ground

1.3 Others

Symbol	Function
O.V.P	Internal Protect circuit against over-voltage
T.S.D	Internal Protect circuit against overheat

1.4 Function & Description of each terminals

(1) Vin terminal (4 PIN), Start circuit

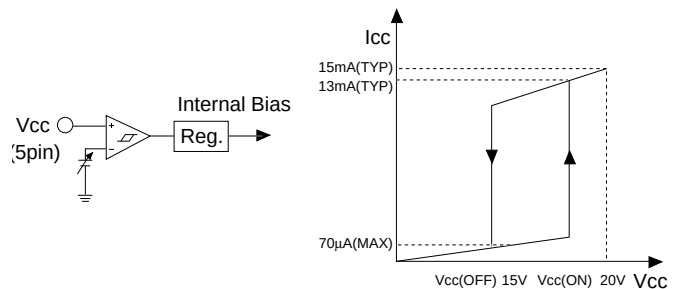
The Start circuit performs the operation start and stop of control IC by voltage of Vin terminal (4 PIN).

In power start, C2 is charged through the start resistor Rs. If the Vin terminal voltage reaches 16V (TYP), control IC starts operating and current increases by the operation of Start circuit. If this voltage decreases and reaches lower than 10V (TYP), the control IC stops and returns initial states by the operation of UVLO (operation stop circuit).

The control circuit gains power by rectifying the trans wire wound D after operation.

As the voltage of trans wire wound doesn't go up to the set voltage just after operation, the Vin terminal voltage begins to decrease. But as the voltage of operation stop is set to 11V (Max), the voltage of trans wire wound reaches the set value and control IC keeps operating while the Vin terminal voltage decreases to the voltage of operation stop.

The Vin Start voltage (Terminal 4) is 16V (TYP), the voltage of operation stop is 10V (TYP) and the Vovp voltage is 22.5V (TYP).



Start Circuit

Vin terminal voltage waveform

(2) OCP / FB terminal (Terminal 1), Oscillator and Constant voltage control circuit

The oscillator is to use charge or discharge of internal condenser C1 and to select PRC (Pulse Ratio Control) which fixes off time of MOSFET and changes on time of it.

The voltage regulator Vr4, which is generated when the FB current through Photo Coupler flows in R4, is approved by Vr5. Because of this, Comp. 1 reverses and needed voltage value of Vr5 (peak value of Id) is supplied from Vr4(FB current). Like this Output control is current mode control.

(3) OCP / FB terminal (Terminal 1) and OCP circuit

OCP circuit is the Protection circuit against over-current which selects the pulse by pulse way. This way is to reverse oscillator output by detecting peak value of MOSFET drain current every pulse.

Detecting MOSFET drain current is done by connecting R5 with MOSFET source terminal (Terminal 2) and GND terminal (Terminal 3) and by inputting regulated voltage to OCP/FB terminal. The threshold voltage Vth (1) of OCP terminal is about 0.73V compared with GND. External components R4 and R5 are Filter circuit to protect malfunction by surge current which is generated in MOSFET On.

In light load, if output voltage decreases, the trans wire wound voltage in primary part also decreases proportionately and the Vin terminal voltage in primary part reaches lower than operation stop voltage so that OCP circuit stops operating. In this case, the circuit current decreases so that the Vin terminal voltage increases in proportion to charge current by start resistance Rs again and intermittent operation occurs which restarts in operation start voltage.

The advantage of adding the Protection circuit against over-current is as follows. When input voltage is high, the surge voltage becomes low by controlling MOSFET drain current low and stress of voltage in MOSFET becomes less in start and overload.

And stress of current in secondary Diode can be also less by controlling output voltage regular.

(4) Latch circuit

Latch circuit is to stop power circuit operating by keeping the output of oscillator low in operating of two circuits (OVP & TSD) which protect Over-voltage and overheat.

Latch circuit is to protect malfunction caused by noise etc..

And this circuit starts to function when OVP and TSD operates for more than 8 seconds. In this case, delay time is set by timer circuit in control IC.

Though Latch circuit operates, Constant voltage power (Reg) circuit in control IC is also operating and the circuit current is high. So the Vin terminal voltage decreases rapidly.

If the Vin terminal voltage becomes lower than operation stop voltage 10V (TYP), circuit current becomes below 400uA and the Vin terminal voltage begins to increase. On the contrary, if the Vin terminal voltage reaches operation start voltage 16V (TYP), circuit current begins to increase and the Vin terminal voltage begins to decrease.

In other words, the Vin terminal voltage rises and falls between 10V (TYP) and 16V (TYP).

Like this, the latch circuit protects the Vin terminal voltage from increasing abnormally.

Releasing latch circuit is done by making the Vin terminal voltage lower than 6.5V and generally latch circuit is restarted after cutting AC input.

(5) Protect circuit against overheat

This circuit lets latch circuit operate when the frame temperature of Hybrid IC is above 140°C(Min).

Actual temperature is detected by control circuit element. This is to protect MOSFET from overheat which is caused by the system that MOSFET and control circuit element are on the same frame.

(6) Protect circuit against over-voltage

This circuit lets latch circuit operate when the Vin terminal voltage exceeds 22.5V (TYP) and this is used to protect the Vin terminal in control circuit from over-voltage.

Commonly the Vin terminal is supplied with subsidiary wire wound of Trans and this voltage is in proportion to output voltage so that this Protect circuit against over-voltage operates in over-voltage output in secondary part when the circuit of detecting voltage is open.

1.5 STR G6153T(ST-BY STR)

(1) Description of each terminals

No.	Symbol	Name	Function
1	D	Drain terminal	MOSFET drain
2	OCP	Over-current terminal	Input signal of detecting over-current in primary part
3	GND	Ground terminal	Ground
4	FB	Feed-Back terminal	Input signal of controlling constant voltage
5	Vcc	Power terminal	Input control circuit power

Others

Symbol	Function
OVP	Protect circuit against over-voltage
OLP	Protect circuit against overload
TSD	Protect circuit against overheat
SS	Soft start function

(2) Operation stop circuit (UVLO)

This begins operation control if voltage is supplied to low subsidiary current terminal (Vcc) 5PIN.

If the supplied voltage in the same terminal reaches operation start current voltage (Vcc), 17.5V (TYP), current is supplied to circuits within IC and then the operation stop circuit (UVLO) begins operation control and high impedance is sustained until the supplied voltage reaches the same voltage. In this time, the supplied current is circuit current (Icc) in not operating and it is 70uA (Max).

If the operation stop circuit begins operation control, circuit current (Icc) in operation, about 15mA flows in the same terminal. In controlling operation, if the supplied voltage in this terminal goes below operation stop current voltage (Vcc), 11.5V (TYP), IC stops functioning.

Like this, this terminal plays a role to detect supplied voltage and to control operation start in low voltage input.

(3) Internal Oscillator (OSC)

Condensor to determine oscillation frequency : Ct

If IC begins operating, Ct is charged from internal power by constant current I1. At this moment, both SW1 and SW2 become open.

If electric potential of charge reaches about 4V, comparator reverses, and SW1 and SW2 are on simultaneously.

If setting the state that I1 is lower than I2, SW1 becomes on, Ct gets discharged and Vt decreases.

Oscillation is made by these operations.

Maximum Duty cycle of oscillator is set to 80% (TYP) and frequency is set to 100KHz (TYP). Globular shaped wave output of Comparator is used as timing clock in internal circuit and triangle shaped wave output is used as standard signal for transforming pulse width which will be mentioned later.

(4) Control mode (PWM Latch / Feed Back)

Control mode of IC uses MIX Mode which is switched to the voltage control mode in lightload and current control mode in heavyload linearly according to load.

MIX control mode operates PWM control comparing standard triangle shaped wave with current waveform piled up on DC FB voltage. So input voltage difference of PWM Comparator in waveform cross becomes bigger and as a result, stable PWM signal is gained.

In MIX control mode, enough noise margin can be obtained with changing voltage PWM of standard triangle shaped wave. Also, even in continuation inductor mode in which On Duty is over 50%, Sub-harmonic phenomenon is suppressed and every essential part of internal oscillator becomes optimum.

(5) Protect circuit, Protect circuit against over-voltage, Protect circuit against overheat (OLP/OVP/TSD)

1) Protect circuit against overload

This IC has protect circuit against over-current which detects over-current every pulse.

In over-current, FB system cuts Photo Coupler for FB off because output voltage doesn't reach set voltage.

If detecting "Over-current Detector" signal and the "FB Current Mirror Detector" signal, internal timer count starts operating 655ms later after detection.

Just after overflow, the "Count Out" signal is output and at the same time previous operation is stopped. In this state, main switch is fixed to off and latch circuit starts operating. Also, in latch operation, latch circuit needs 400uA (Max) for maintenance and this current is influenced by the electric potential of Vcc terminal.

If the supplied voltage in Vcc terminal goes below power voltage for releasing latch circuit, 8.7V (TYP), latch operation can be released. When this latch operation is released, this IC begins start operation from Soft Start.

2) Protect circuit against over-voltage

If the supplied voltage in subsidiary power terminal (Vcc) of this IC exceeds 22.2V (TYP), oscillation operation is stopped by the protect circuit against over-voltage, and in this state, main switch is fixed to off and latch operation begins.

* power voltage Vcc(ovp) for OVP operation = 22.2V (TYP)

3) Protect circuit against overheat

When the temperature of internal chip reaches 150°C (TYP), oscillation operation stops. In this state, main switch is fixed to off and latch operation begins.

(6) Soft Start, Protect circuit against over-current

1) Protect circuit against over-current

In main switch's on, drain current is monitored. If drain current over standard value is detected, main switch is switched to off immediately. This drain current detection is performed every time main switch is on. The standard voltage in OCP terminal is 0.75V (TYP).

2) Soft Start function

As this IC has Soft Start function which is Timer way, external condenser for Soft Start is unnecessary.

Soft Start function is performed by increasing standard voltage for detecting over-current step by step and by controlling current in main switch.

There are 4 steps and voltage level and continuant time of each steps are fixed inside. Table SS(1) ~ SS(4) shows this.

Symbol	MIN	TYP	MAX
Vss(1)	0.16	- -	0.35
Vss(2)	0.35	- -	0.54
Vss(3)	0.51	- -	0.68
Vss(4)	0.63	- -	0.75

2 MSP3410G : Sound Block

(1) Introduction

The MSP 3410G family of single-chip Multistandard Sound Processors covers the sound processing of all analog TV-Standards worldwide. The full TV sound processing, starting with analog sound IF signal-in, down to pro-cessed analog AF-out, is performed on a single chip.

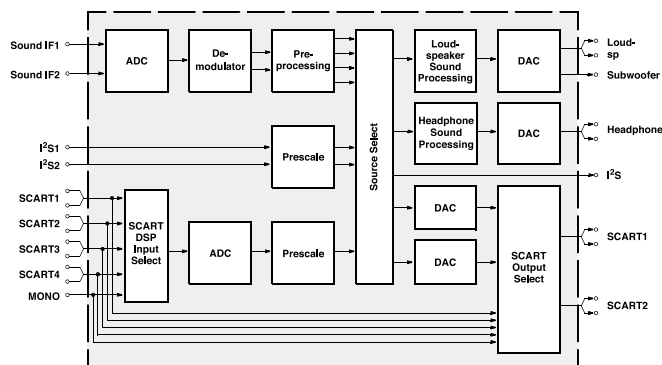
Figure shows a simplified functional block diagram of the MSP 3410G.

Surround sound can be reproduced to a certain extent with two loudspeakers.

These TV sound processing ICs include versions for processing the multichannel television sound (MTS) signal conforming to the standard recommended by the Broadcast Television Systems Committee (BTSC).

The DBX noise reduction, or alternatively, MICRONAS Noise Reduction (MNR) is performed alignment free.

The MSP 3410G has built-in automatic functions: The IC is able to detect the actual sound standard automatically (Automatic Standard Detection). Furthermore, pilot levels and identification signals can be evaluated internally with subsequent switching between mono/stereo/bilingual; no I²C interaction is necessary (Auto-matic Sound Selection).



(Fig Simplified functional block diagram of the MSP 3410G)

(2) Features

- Automatic Standard Detection of terrestrial TV standards
- All NICAM standards
- All Analog FM-Stereo A2 standards
- Simultaneous demodulation of high-deviation FM-Mono and NICAM (China)
- Very high-deviation FM-Mono mode(China,Eutelast,etc.)
- FM demodulation of all analog satellite standards.
- ADAPTIVE deemphasis for satellite(According to ASTRA specification)
- ASTRA Digital Radio(ADR) together with DRP3510A.

(3) Sound IF Processing

1) Analog Sound IF Input

The input pins ANA_IN1+, ANA_IN2+, and ANA_IN-offer the possibility to connect two different sound IF(SIF) sources to the MSP 3440G. The analog-to-digital conversion of the preselected sound IF signal is done by an A/D-converter. An analog automatic gain circuit(AGC) allows a wide range of input levels. The high-pass filters formed by

the coupling capacitors at pins ANA_IN1+ and ANA_IN2+.

2) Demodulator: Standards and Features

The MSP 3440G is able to demodulate all TV-sound standards worldwide including the digital NICAM system.

Very high deviation FM-Mono: Detection and robust demodulation of one FM carrier with a maximum deviation of 540 kHz.

(3) Block Diagram

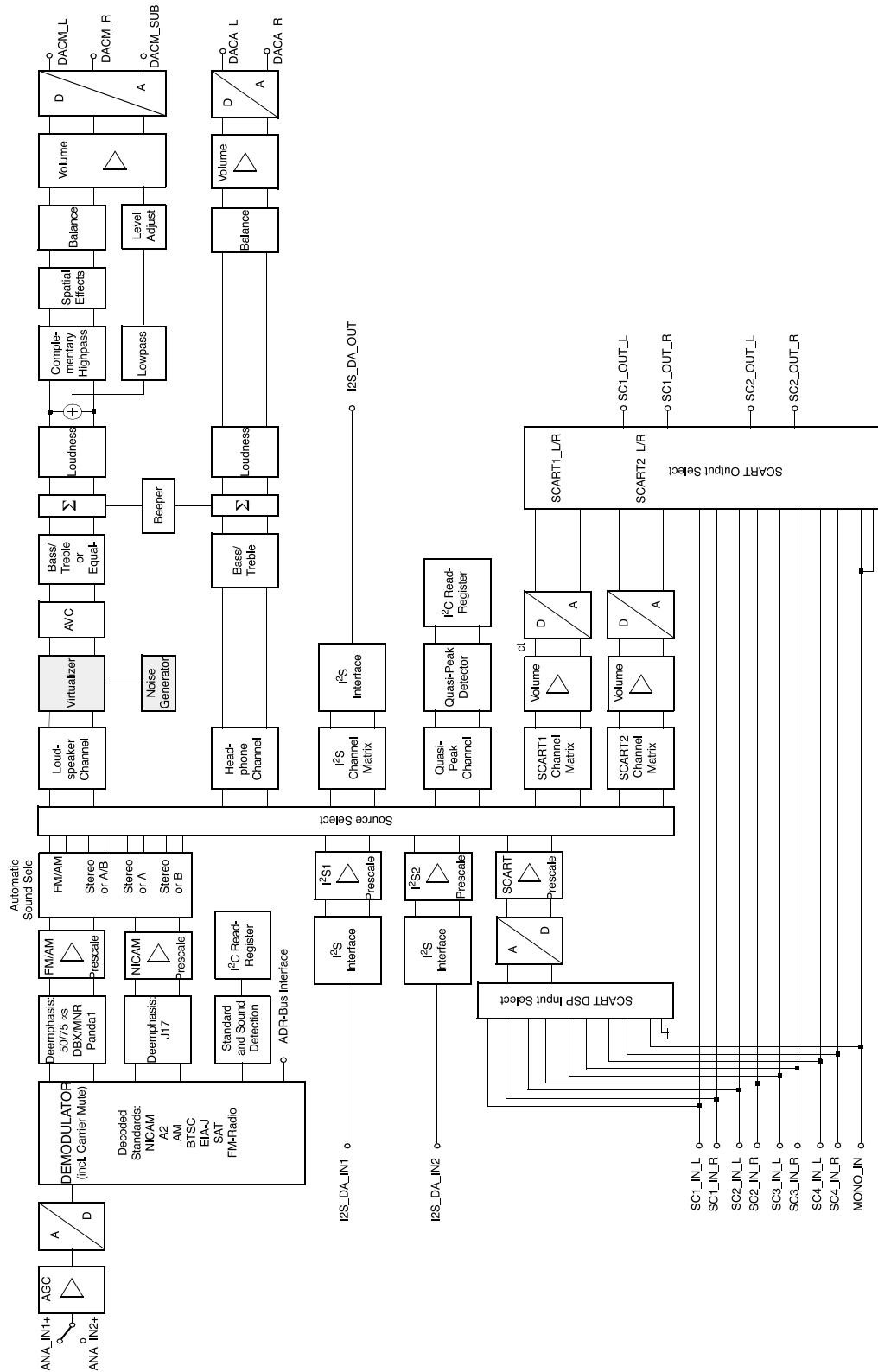


Fig Signal flow block diagram of the MSP 3410G(input and output names correspond to pin names)

3. LCD Driver Part

3.1 E07050K0A : Video Signal Processor IC for TFT-LCD

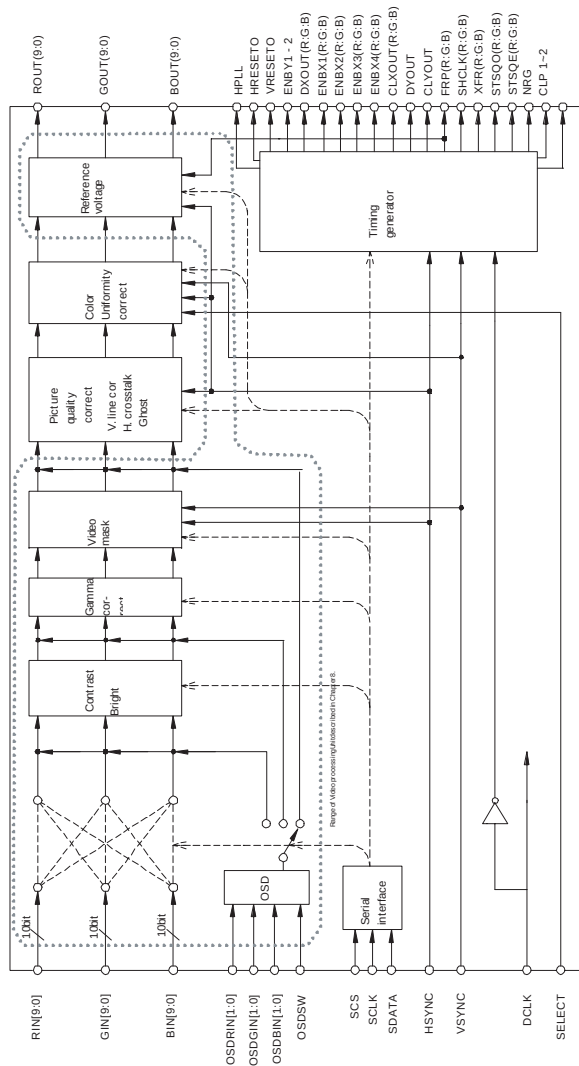
(1) Scope

These specifications apply to the E07050K0A CMOS IC.

<Feature>

- 1) Operation clock frequency Max. 85 MHz
- 2) RGB swap function (RGB three-system set's video signals can be swapped via external settings)
- 3) Contrast and brightness adjustment functions
- 4) Ten-bit digital gamma correction function (look-up table type with interpolation process)
- 5) Image quality improvement function
(Vertical stripes correction, ghost image correction, horizontal crosstalk correction)
- 6) Built-in OSD function (2 bits • 3 systems, 1 control pin)
- 7) Output masking of video signals is enabled
- 8) Color uniformity correction function (look-up table type with interpolation process)
Enables setting of correction data for three brightness levels or four brightness levels.
Two types of screen correction segments (32 horizontal segments • 24 vertical segments or 16 horizontal segments • 12 vertical segments).
- 9) Enables insertion of reference signal in video signal.
- 10) Outputs drive signal for panel
- 11) Data is set via three-wire serial interface
- 12) Built-in boundary scan function
- 13) 176-pin (24 mm • 24 mm) QFP package

(2) Block Diagram



3-2 E06070D0A : Video signal conversion IC for TFT-LCD

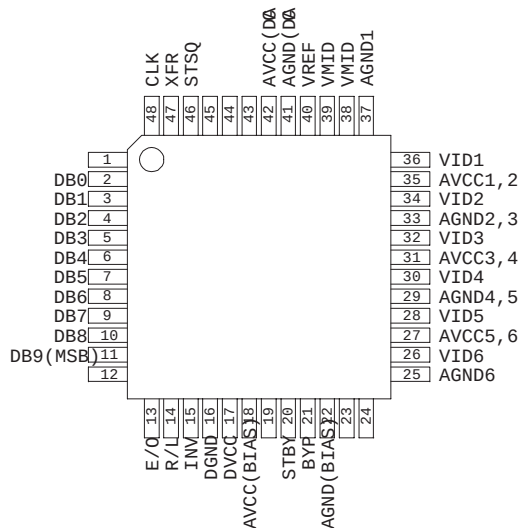
(1) Scope

The E06070D0A provides a fast, 10bit latched decimating digital input, which drives 6 channel high voltage drive outputs. Flexible digital input formats, allow several L3E06070D0As to be used in parallel for higher resolution displays.

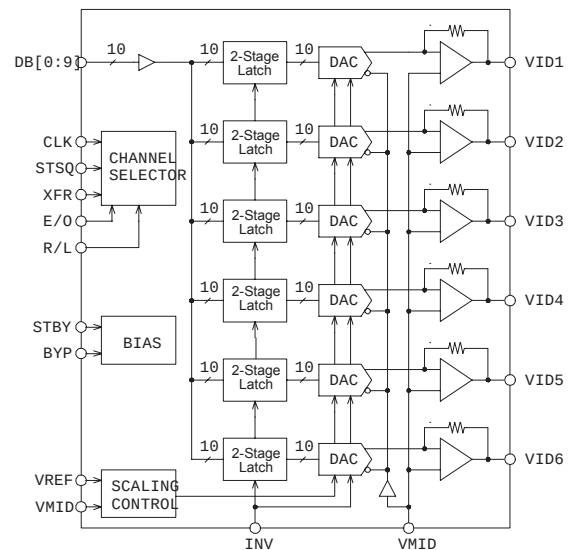
<Feature>

- (1) Operation clock frequency :85 MHz
- (2) 10-bit digital video signal input
- (3) Digital serial parallel conversion (6-ch output)
- (4) Built-in D/A converter (10 bit)
- (5) Built-in amplifier for video signal polarity inversion
- (6) High slew rate output: Typ. 265 V/ μ s (can drive a TFT panel directly)
- (7) Wide output dynamic range of 1.5 to 13.5 V
- (8) Built-in function for switching scan direction
- (9) Low power consumption
- (10) 48-pin (7x7 mm 2) QFP package

(2) Pin Layout



(3) Block Diagram



3.3 E01031F0A : TFT-LCD Level Shifter IC

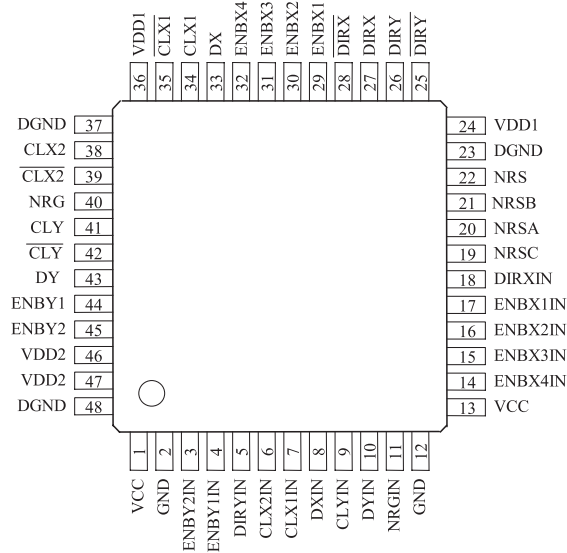
(2) Pin Layout

(1) Scope

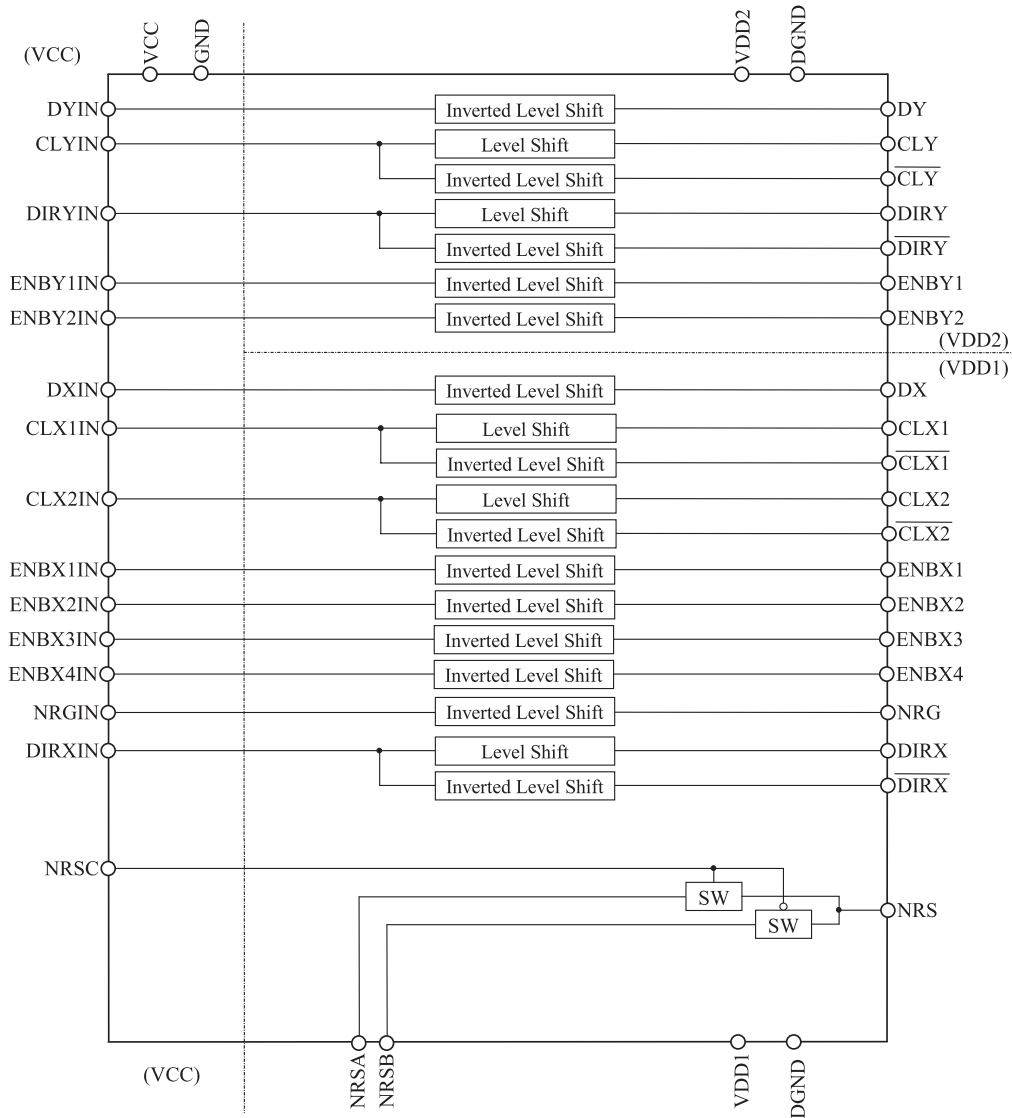
The L3E01031F0A is an interface IC for driving TFT active matrix panels with built-in drivers. Its high voltage circuit acts as an interface between the control IC and the drivers on the LCD panel.

<Feature>

- (1) Clock Frequency Max. 4.2 MHz
(Care is required to avoid exceeding the allowable power dissipation for the package, which is 280mW.)
- (2) Internal level shift circuit converts input to a signal capable of driving a TFT panel.
- (3) Built-in multiplex function to switch the panel auxiliary signal.
- (4) CMOS Si-Gate process.
- (5) 48-pin plastic flat package (lead pitch 0.5mm QFP).
- (6) Does not feature radiation resistant or light and noise resistant design.



(3) Block Diagram



DESCRIPTION OF MICOM

1. Feature of MICOM Function

1-1. Signal Selection

- (1) Input signal selection : RGB1(Analog)/RGB2(Analog)/RGB3(Analog/Digital)/Video/S-Video/Component
- (2) A/V color standard automatic signal selection : NTSC/PAL/SECAM/NTSC 4.43/PAL M/PAL N/PAL 60
-> Automatic system detection
- (3) Specification of PC input signal : Refer to "PC Input Specification Table".
- (4) Specification of Component input signal : 480I,480P,DVD 625Line,576P,720P,1080I 50Hz,1080I 60Hz

1-2. Video Interpolation Extension, Compression Support

You can control the correspondent IC like scaler after discrimination of input signal. If the resolution is lower than XGA, you can extend it to the XGA scale. Or if it is higher than XGA, you can compress it to XGA scale.

* Resolution : Set the resolution lower than 1280x720 in order to adjust the picture of panel (resolution:1280x720) to the screen.

1-3. Judging No Signal

OSD,SOUND Mute

1-4. Video Signal Adjustment

- (1) Analog RGB(PC) input : Contrast, Brightness, Color(R, G, B)
Clock, Phase, H Position, V Position
- (2) Digital RGB (DVI) input : Contrast, Brightness, Color(R, G, B)

※ Clock, Phase, etc. are automatically adjusted on auto tracking mode, but noise can be included in the signal owing to the IC specification and also they can't be adjusted precisely according to the signal pattern.
So the manual to adjust Clock, phase, etc. manually.

1-5. Sound Signal Adjustment

Volume, Mute,DASP,AVL,MIC

1-6. Other Functions

Item	REF
ARC(Aspect Ratio Control)	Analog/Digital RGB :4:3,16:9 mode Toggle funtion Video/S-Video/Component :4:3,16:9 ,zoom 1,zoom 2,zoom 3 mode Toggle funtion
ZOOM	Adjusting the magnification of zoom by shortened key.(+/- 25 level)
Checking Lamp Time	Checks used time to now and displayes the fact when replacing time gets.
OSD Language Selection	Korean, English, French, German, Italian, Spanish, Chinese,Japanese
Auto Tracking	Automatically controlling CLOCK, PHASE
Set ID	Characteristic number of set which is used to adjust the funtions of set with PC by connecting RS-232C terminal(1~99). When the Set ID specified in PC P/G accords with the set ID specified in the set,the funtions of set can be controlled by using the menu of PC P/G.
APC(Auto Picture Control)	By using this menu,you can select "clear","soft","comfortable" or "off" in Video,S-Video,Component.
Audio Input	By using this menu,make speaker output by selecting audio input R/L or Mic. And you can use R/L by connecting the stereo output from DVDP or STB.

1-7. Controlling Power

- (1) ST-BY -> Power On key in -> Main Power On -> Fan Off -> Blue Background -> Lamp On
-> LOGO ON -> Video output or No signal
- (2) Power Off key in -> Lamp Off -> Audio mute -> Fan Off -> Main Power Off -> ST-BY

1-8. Data Saving

EEPROM(24C256), EEPROM IIC BUS

1-9. Warning OSD and Controlling LED

Operation indicator LED	Orange	● Stand-By
	Orange(flashing)	● lamp is cooling as power out(1 minutes),Ignore the power on input.
	Green	● Run
	Green(flashing)	● 7 Sec. : Cooled for a minute before turning off the lamp. ● 25 Sec. : Didn't cool the lamp for a minute while turning off the lamp.
	Off	● Off (the state that AC S/W is off or the Power cable isn't connected)
Lamp Indicator LED	Red	● Warning the life of lamp, Needing to replace the lamp (over 10000H) ● Displaying OSD for lamp warning when power on.
	Red(flashing)	● Lamp on error. (case of lamp isn't on when power on) ● Turn on the lamp and start the detect after 5 seconds. When occuring error,turn off the lamp at once.
	Green(flashing)	● Warning of lamp case open ● Power off forcedly, Not Power on
Temperature indicator LED	Red	● High temperature.Power off
	Red(flashing)	● Warning of fan1 malfunction. (Perceived after 20 ~ 60 seconds because it takes a little time to check internally.)
	Green(flashing)	● Warning of fan2 malfunction. (Perceived after 20 ~ 60 seconds because it takes a little time to check internally.)

1-10. Checking and Initiating the Lamp Time

Used lamp time is displayed on the menu.

(1) Over 10000 hours : Informs warning.(Red LED), Displaying warning OSD when power on.

If you don't initializing the lamp,it is always display warning OSD on screen when turning on the lamp.

(2) Initiation : Used time must be initiated by the user after replacing the lamp.

You can move to the next service menu by pressing the "MENU" key,and when you press the "MENU" key continuously,you can move to "LAMP TIME RESET" menu.

If you press the "+" key (VOL+) in this menu,the user lamp time is reset.And then press the "ENTER" key to come out of service menu.

※ Caution : Changing the set value in other menus besides "LAMP TIME RESET" or input other keys besides "MENU" key can cause serious problem to the lamp.Always use the "ENTER" key to cancel the service menu in "LAMP TIME RESET" menu.

1-11. Remote Mouse Control

(1) Funtion the mouse of PC.

(2) Apply the 16 directions and left,right click/drag.

(3) Apply the function of the PS/2,MAC Mouse.

1-12. DDC1/2B

Use the specified IC-24LC21 for DDC1/2B to write EDID table data on 24C21 through adjustment Zig.

1-13. Micom Controlled IC's

Chip Name	Function
24LC256	EEPROM
MSM82C55	PORT EXPANSION IC
PW164	MICOM EMBEDDED SCALER IC
VPC3230D	VIDEO DECODER
FLI2200	VIDEO DEINTERLACE IC
ET7050	TIMING GENERATOR GAMMA/COLOR UNIFORMITY
M62320	I2C Controlled OUTPUT PORT
AD9884	ADC
M62352	DA CONVERTER
AT24LC21	DDC 1/2B

1-14. PC Input Specification Table

- HD sigal(D-Sub 15pin input)
 - (1) 280X720,60Hz/59.94Hz
 - (2) 1920X1080,Interface 60Hz/59.94Hz

		Resolution	Vertical Frequency	Horizontal Frequency
VGAEGA		640 x 350	70.090Hz	31.468KHz
		640 x 350	85.080Hz	37.861KHz
PC98		640 x 400	85.080Hz	37.861KHz
(VGA Text)		720 x 400	70.082Hz	31.469KHz
		720 x 400	85.039Hz	37.927KHz
VGA		640 x 480	59.940Hz	31.469KHz
		640 x 480	72.800Hz	37.861KHz
		640 x 480	75.00Hz	37.500KHz
		640 x 480	85.008Hz	43.269KHz
		640 x 480	100.040Hz	53.011KHz

		Resolution	Vertical Frequency	Horizontal Frequency
SVGA		800 x 600	56.250Hz	35.156KHz
		800 x 600	60.317Hz	37.879KHz
		800 x 600	72.188Hz	48.077KHz
		800 x 600	75.00Hz	46.875KHz
		800 x 600	85.061Hz	53.674KHz
		800 x 600	100.00Hz	64.016KHz
XGA		1024 x 768	43.479Hz	35.522KHz
		1024 x 768	60.004Hz	48.363KHz
		1024 x 768	70.069Hz	56.476KHz
		1024 x 768	75.029Hz	60.023KHz
		1024 x 768	84.997Hz	68.677KHz
SXGA		1152 x 864	60.053Hz	54.348KHz
		1152 x 864	70.016Hz	63.995KHz
		1152 x 864	75.00Hz	67.500KHz
		1152 x 864 *	85.057Hz	77.487KHz
		1280 x 960	60.00Hz	60.00KHz
		1280 x 960	75.00Hz	75.00KHz
		1280 x 1024	60.020Hz	63.981KHz
MAC	16 i	832 x 624	74.550Hz	49.725KHz
	19 i	1024 x 768	60.004Hz	48.363KHz
		1024 x 768	75.029Hz	60.023KHz
	21 i	1152 x 870	75.062Hz	68.681KHz
HD		1920 x 1080i *	60.00Hz	33.750KHz
		1280 x 720 *	60.00Hz	45.00KHz

“*” : Only available to RGB1,2 mode. Not applied to RGB3 mode.

1-15. AV Input Specification

Item	Specification	Remark
Video Input applicable System	NTSC M	3.579545 / 60 Hz
	NTSC 4.43	4.433618 / 60 Hz
	PAL B,G,H,I	4.433618 / 50 Hz
	PAL M	3.575611 / 60 Hz
	PAL N	3.582056 / 50 Hz
	SECAM	4.286 / 50 Hz
	PAL 60	4.433618 / 60 Hz

1-16. S-VIDEO Input Specification

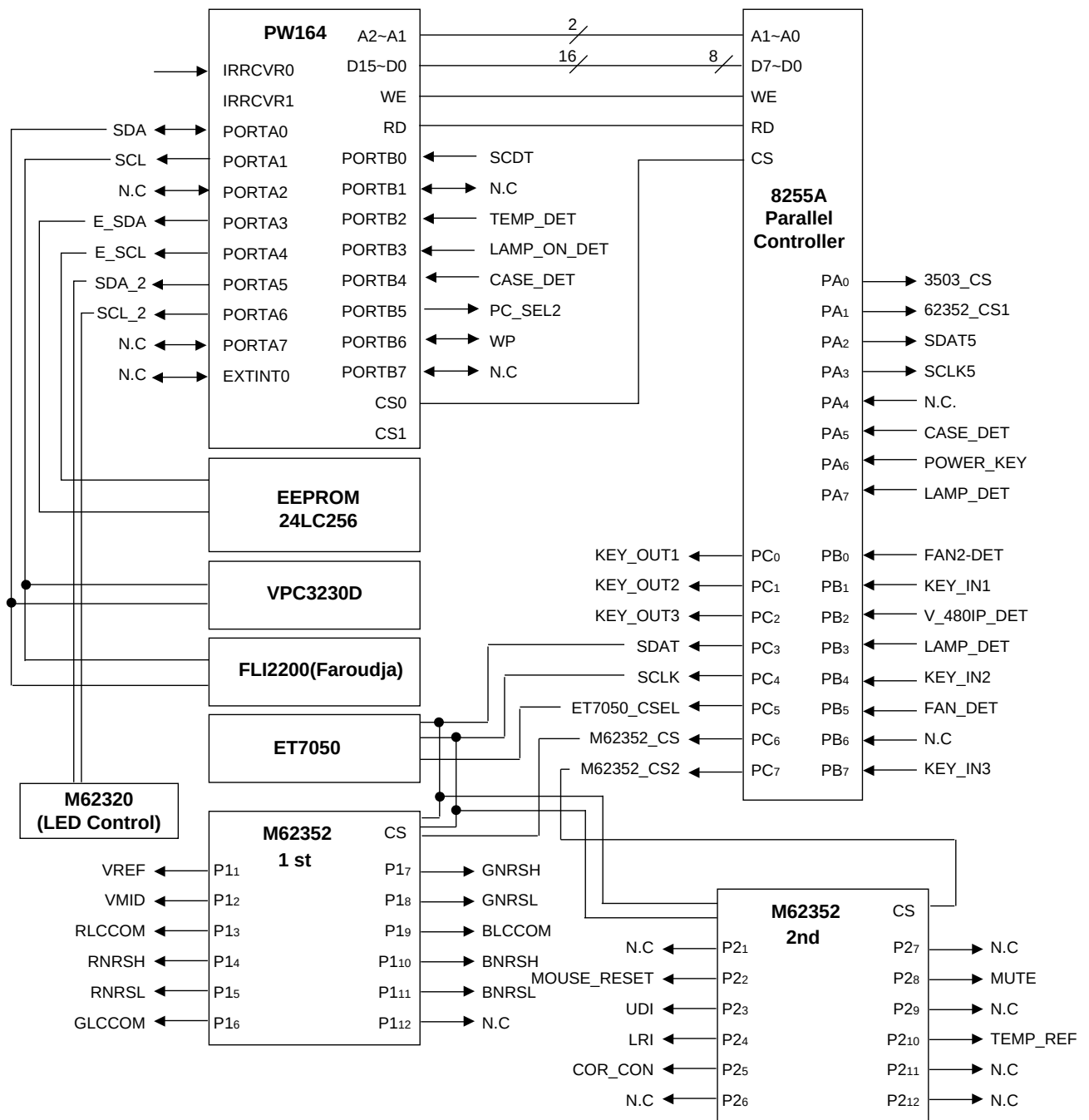
: NTSC/PAL

Item	Specification	Remark
Video Input applicable System	NTSC M	3.579545 / 60 Hz
	PAL B,G,H,I	4.433618 / 50 Hz

1-17. Component(DVD/HD STB) Input Specification

No.	Specification			Proposed
	Resolution	H-Freq(KHz)	V-Freq(KHz)	
1	640 x 480	15.73	60	SDTV,DVD 480I
2	640 x 480	15.63	59.94	SDTV,DVD 480I
3	704 x 480	31.47	59.94	EDTV 480P
4	720 x 576	15.625	50.00	SD 576I(625 Line)
5	720 x 576	31.25	50.00	HDTV 576P
6	1280 x 720	45.00	60.00	HDTV 720P
7	1280 x 720	44.96	59.94	HDTV 720P
8	1920 x 1080	31.25	50.00	HDTV 1080 50I
9	1920 x 1080	33.75	60.00	HDTV 1080 60I
10	1920 x 1080	33.72	59.94	HDTV 1080 59.94I

2. Block Diagram

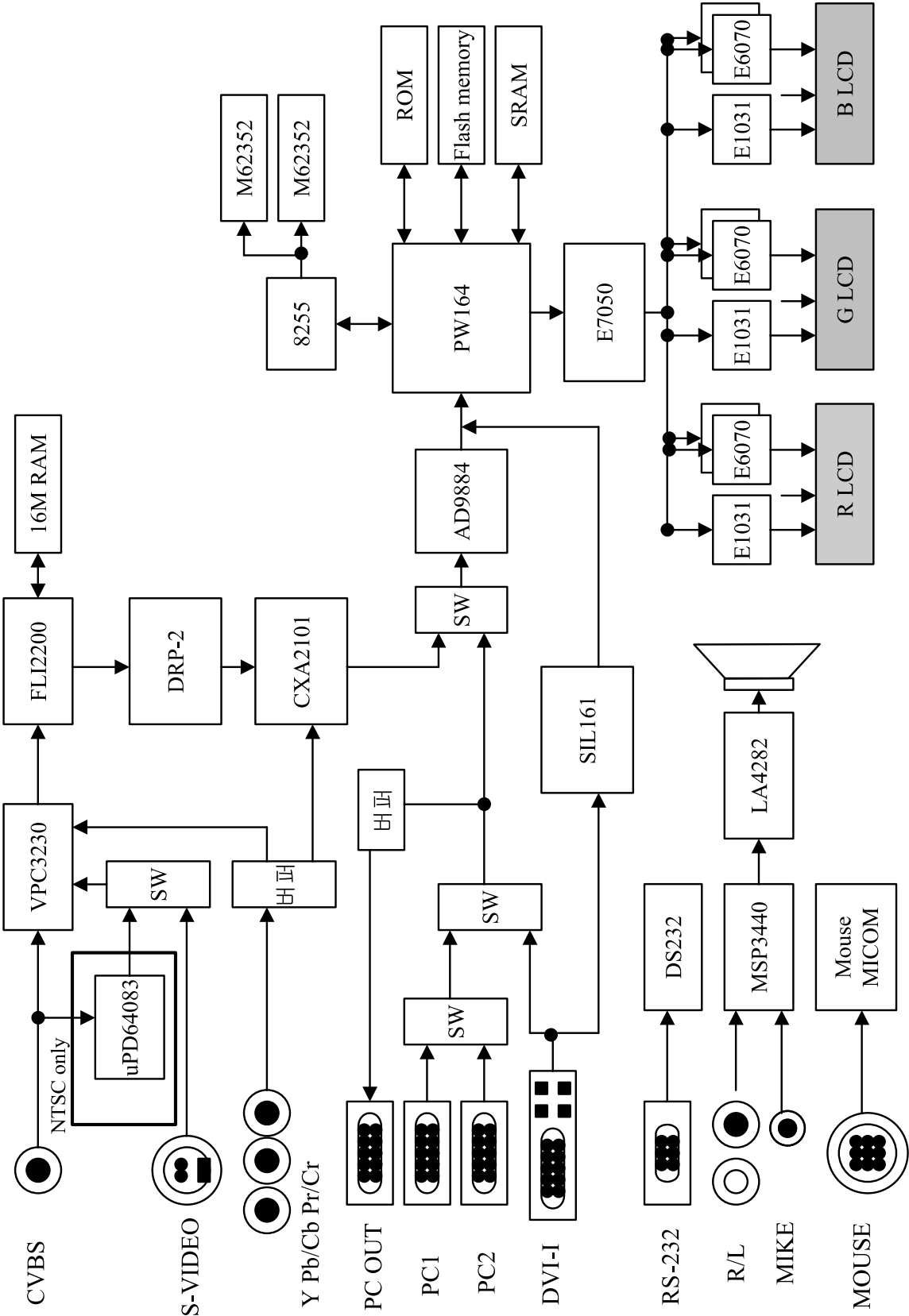


2-1. Description of Control Part

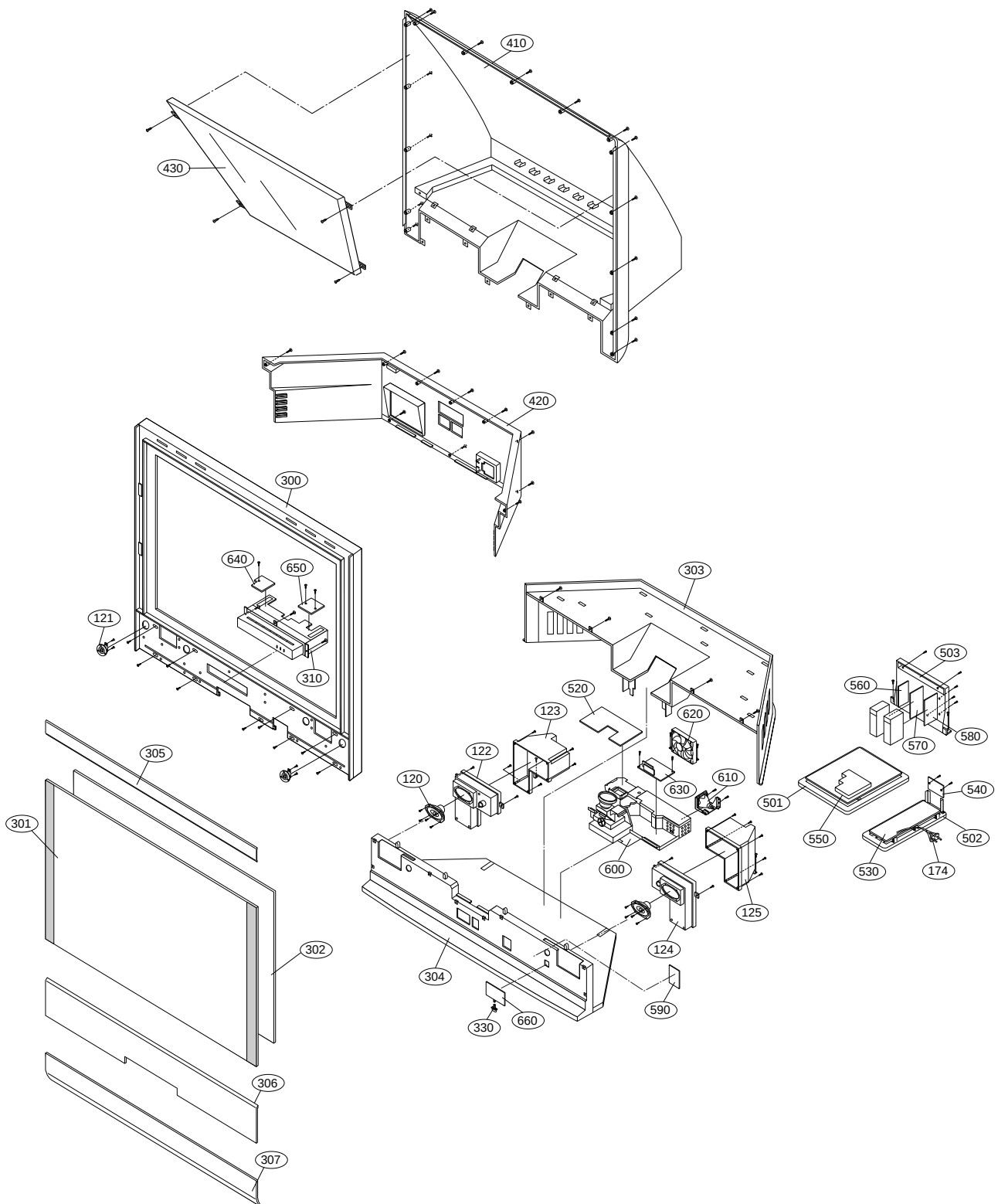
No.	Symbol	I/O	Active	Reset	Function
A19~A0		O			• Address Bus
D15~D0		I/O			• Data Bus
/RD		O	L		• Read Enable
/WE		O	L		• Write Enable
IRRCVR0	IRRCVR0	I			• Remote Control IR Signal : IR is NEC Format
IRRCVR1	IRRCVR1	I			Not Used
PORTA0	SDA	O	H/L		• I ² C Bus Clock & Data Line
PORTA1	SCL	O	H/L		• AD9884, FLI2200, VPC3230D, CXA2101
PORTA2	NC	I/O	H/L		Not Used
PORTA3	E_SDA	O	H/L		• EEPROM I ² C Bus Data Line (EEPROM,24LC256)
PORTA4	E_SCL	O	H/L		• EEPROM I ² C Bus Clock Line (EEPROM,24LC256)
PORTA5	SDA_2	O	H/L		• LED Control I ² C Bus Data Line (M62320)
PORTA6	SCL_2	O	H/L		• LED Control I ² C Bus Clock Line (M62320)
PORTA7	N.C	I/O	H/L		Not Connection
PORTB0	SCDT	I	H		• Sync detection from TFP401.
PORTB1	N.C	I/O	H/L		Not Connection
PORTB2	TEMP_DET	I	H		• Temperature detect
PORTB3	LAMP_ON_DET	I	H		• Lamp On/Off status detect.
PORTB4	CASE_DET	I	H		• Lamp case open error detect.
PORTB5	PC_SEL2	O	H/L		• Selection between RGB3 and RGB1,2 selection result.
PORTB6	WP	I/O	H/L		• EEPROM(24LC256)Write protection
PORTB7	N.C	I/O	H/L		Not Connection
CS0	8255_CS	O	L	H	• MSM82C55A Chip Select(for IC Control using data bus)
CS1	N.C	I/O	H/L		Not Connection
EXTINT0	N.C	I/O	H/L		Not Connection
EXTINT1	N.C	I/O	H/L		Not Connection
PA ₀	N.C	I/O	H/L	L	Not Connection
PA ₁	LAMP_ON	O	H	L	• Lamp ON/OFF (HIGH/LOW)
PA ₂	FAN_ON	O	H	L	• Fan ON/OFF (HIGH/LOW)
PA ₃	POWER_ON	O	H		• Main Power ON/OFF (HIGH/LOW)
PA ₄	PC-VIDEO-SEL	O			• Select PC or AV(From CXA1201) for AD9884 input.
PA ₅	PC_SEL1	O			• Select between RGB1 or RGB2.
PA ₆	ADDOWN	O	L		• ADC(AD9884) power down for digital RGB3.
PA ₇	TMDSOE	O	H		• TFP401 digital RGB output enable for digital RGB3.
PB ₀	FAN2_DET	I			• Fan2 operation error detect(High:fan error)
PB ₁	KEY_IN1	I			• Inputs for KEY Scanning
PB ₂	V_480IP_DET	I			• Detect component input(480i or higher resolution->low:480i)
PB ₃	LAMP_DET	I			• Lamp on/off status detect.(High:lamp error)
PB ₄	KEY_IN2	I			• Inputs for KEY Scanning
PB ₅	FAN_DET	I			• FAN1 operation error detect.

No.	Symbol	I/O	Active	Reset	Function
PB ₆	N.C.	I			No connection
PB ₇	KEY_IN3	I			• Inputs for KEY Scanning
PC ₀	KEY_OUT1	O	H/L		• KEYPAD polling output 1
PC ₁	KEY_OUT2	O	H/L		• KEYPAD polling output 2
PC ₂	KEY_OUT3	O	H/L		• KEYPAD polling output 3
PC ₃	SDAT	O	H/L		• ET7050,M62352 data line
PC ₄	SCLK	O	H/L		• ET7050,M62352 clock line
PC ₅	ET7050-CSEL	O	H/L		• ET7050 chip selection (enable) line
PC ₆	M62352_CS	O	H/L		• M62352 selection (enable) line
PC ₇	M62352_CS2	O	H/L		• M62352 selection (enable) line
P1 ₁	VREF	O	Analog		• Full-scale setting voltage
P1 ₂	VMID	O	Analog		• Center video signal setting voltage
P1 ₃	RLCCOM	O	Analog		• Potential of opposing electrode of liquid crystal panel(red)
P1 ₄	RNRSH	O	Analog		• TFT panel auxiliary signal input A(red)
P1 ₅	RNRSL	O	Analog		• TFT panel auxiliary signal input B(red)
P1 ₆	GLCCOM	O	Analog		• Potential of opposing electrode of liquid crystal panel(green)
P1 ₇	GNRSH	O	Analog		• TFT panel auxiliary signal input A(green)
P1 ₈	GNRSL	O	Analog		• TFT panel auxiliary signal input B(green)
P1 ₉	BLCCOM	O	Analog		• Potential of opposing electrode of liquid crystal panel(blue)
P1 ₁₀	BNRSH	O	Analog		• TFT panel auxiliary signal input A(blue)
P1 ₁₁	BNRSL	O	Analog		• TFT panel auxiliary signal input B(blue)
P1 ₁₂	N.C.	O	Analog		No connection
P2 ₁	N.C.				No connection
P2 ₂	N.C.				No connection
P2 ₃	MOUSE_RESET	O	H/L		• Mouse IC(AT89C51) reset signal out
P2 ₄	UDI	O	H/L		• TFT panel Y direction select
P2 ₅	LRI	O	H/L		• TFT panel X direction select/scan direction switch
P2 ₆	COR_CON	O	H		• Uniformity on/off
P2 ₇	N.C.				No connection
P2 ₈	N.C.				No connection
P2 ₉	MUTE	O			• Sound IC mute port on
P2 ₁₀	N.C.				No connection
P2 ₁₁	TEMP_REF	O	Analog		• Reference voltage for high temperature detect of thermist.
P2 ₁₂	N.C				No connection
PL ₀	LAMP_LED1	O	H/L		• Lamp indicator
PL ₁	LAMP_LED2	O	H/L		
PL ₂	TEMP_LED1	O	H/L		• Temp indicator
PL ₃	TEMP_LED2	O	H/L		
PL ₄	OPER_LED1	O	H/L		• Operating indicator
PL ₅	OPER_LED2	O	H/L		
PL ₆	N.C				No connection
PL ₇	N.C				No connection

Block Diagram



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

NO.	PART NO.	DESCRIPTION
120	120-D38E	SPEAKER,MID-RANGE LG FOSTER 8 OHM 15/25W 87DB 12
121	6400VG0001B	SPEAKER,TWEETER NO FOSTER 8 OHM 20W/30W XX D77
122	3110V00123A	CASE,SPEAKER BOX LEFT
123	3550V00159A	COVER,SPEAKER BOX LEFT
124	3110V00124A	CASE,SPEAKER BOX RIGHT
125	3550V00160A	COVER,SPEAKER BOX RIGHT
174	174-222P	POWER CORD ASSY,SAA L=2200MM 219A(305-002H)
300	3091V00328C	CABINET ASSY,MW-60SZ12 3090V00259 LG NO .
301	3790V00280A	WINDOW FILTER 60" LCD PJTV ACR
302	3350V00015A	SCREEN 60"W LCD PJTV.AS,IMPROVED .
303	3211V00047B	FRAME ASSY 3210V00074B.BASE U
304	3211V00048E	FRAME ASSY BASE MW-60SZ12 LOWER
305	3508V00226E	DECORATION,FRONT AL ANODIZING MW-60SZ12
306	3508V00244E	DECORATION,FRONT ABS SPRAY MW-60SZ12
307	3508V00228E	DECORATION,FRONT AL ANODIZING MW-60SZ12
310	4870V00004E	DRAWER
330	5020V00490A	BUTTON
410	3809V00252C	BACK COVER ASSY,UPPER, 3808V00225A
420	3809V00253C	BACK COVER ASSY,LOWER, 3808V00226A
430	5018V00025C	MIRROR ASSY,MIRROR
501	3210V00072B	FRAME,CHASSIS(DIGITAL)
502	3210V00073A	FRAME,CHASSIS(SMPS)
503	4811V00027A	BRACKET ASSY,BOARD A/V
520	6871VMMB77A	PWB ASSY,MAIN RE-01JB MAIN PCB ASSY
530	6871VPMA02A	PWB ASSY,POWER SMPS RE-01JB
540	6871VPMA03A	PWB ASSY,POWER SMPS RE-01JB ST-BY
550	6871VSMD42A	PWB ASSY,S/AMP RE-01JB SOUND B/D ASSY
560	6871VSMD43A	PWB ASSY,A/V RE-01JB ASSY
570	6871VSMD45A	PWB ASSY,DIGIT RE-01JB DVI B/D ASSY
580	6871VSMD44A	PWB ASSY,RGB RE-01JB PC B/D ASSY
590	6871VSMD54A	PWB ASSY,INTER RE-01JB BALLAST
600	3141VSN200B	CHASSIS ASSY,ILLUMINATION+COMBIN
610	3110V00139A	CASE ASSY,LAMP RN-60SZ10 . .
620	4980V00284A	SUPPORTER ASSY,DC FAN . RN-60SZ10
630	6913V00002A	LAMP ASSEMBLY,EUC-100L/100V PHILIPS FOR LAMP
640	6871VSN198B	PWB ASSY,P/AMP RE01JB ASSY WITH EMI COR
650	6871VSN200A	PWB ASSY,INTER RE-01JB INTERFACE B/D AS
660	6871VSN199A	PWB ASSY,PSW RE-01JB ASSY

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
IC		
IC801B	0ISH817300B	IC,PC817XF3 4D PHOTO COUPLER
IC802B	0ISH817300B	IC,PC817XF3 4D PHOTO COUPLER
IC604	0ISA428200A	IC,LA4282 12S 2CHX10W AUDIO AMP
IC703	0ISH052100C	IC,PQ05RD21 4SIP ST REGULATOR
IC708	0ISH092100B	IC,PQ09RD21 4SIP ST REGULATOR
IC811	0IMCRON002A	IC,MC33262P ON SEMI 8P DIP ST PO
IC820	0ISK666813A	IC,STR-F6668B(LF1352) 5PIN BK STR
IC831	0ISK615311B	IC,STR-G6153T(LF1101) 5PIN BK STR
IC832	0ISH817300B	IC,PC817XF3 4D PHOTO COUPLER
IC841	0ISH817300B	IC,PC817XF3 4D PHOTO COUPLER
IC845	0ISH122100B	IC,PQ12RD21 4SIP ST REGULATOR
IC851	0IMO257633A	IC,LM2576TV-3.3 5PIN ST REGULATOR
IC1001	0IIT323000C	IC,VPC3230D -QA-B3 80P PQFP BK CO
IC1003	0IKE704200J	IC,KIA7042AF SOT-89 TP 4.2V VOLTA
IC1004	0ISJ111733A	IC,EZ1117CST-3.3 3P,SOT-223 TP 3.
IC1101	0ISS464323A	IC,K4S643232E(C)-TC/L60(70) (KM43
IC1102	0IMCRG2001A	IC,FLI2200 SAGE 176P,QFP TRAY VID
IC1103	0IMCRAD001A	IC,ADV7123KSTC140 ANALOG DEVICE 4
IC1104	0IPH740800F	IC,74HC08D SO-14 TP QUAD 2-INPUT
IC1106	0ISJ111733A	IC,EZ1117CST-3.3 3P,SOT-223 TP 3.
IC1108	0ISJ111725A	IC,EZ1117ACST-2.5 3P SOT ST REGUL
IC1109	0IKE702700D	IC,KIA7027AF 3, SOT-89 TP RESET I
IC1110	0ISJ111733A	IC,EZ1117CST-3.3 3P,SOT-223 TP 3.
IC1201	0IMCRFA010A	IC,KA7809R, FAIRCHILD 2P D-PAK, R
IC1202	0ISO210100B	IC,CXA2101AQ 80P,QFP BK VIDEO SIG
IC1203	0IMCRAT003A	IC,EPM7064STC44-100 ALTERA 44P,QF
IC1504	0IRH765700B	IC,BA7657F 24P,SOP TP INPUT SIG.
IC1507	0IMCRSH001A	IC,PQ05DZ1U SHARP 5, SMD TYPE R/T
IC1530	0IDS232000A	IC,DS232AS 16P,SOP TP RS-232 DRIV
IC1600	0IAD988414A	IC,AD9884AKS-140 128P MQFP ST ANA
IC1601	0IMCRPH018A	IC,74LVC126AD PHILIPS 14P SO R/TP
IC1602	0IPRPTI001A	IC,TFP401PZP TEXAS INSTRUMENT 100
IC1603	0IPH747400F	IC,74HC74D SO-14 TP DUAL D-TYPE F
IC1604	0IMCRPH018A	IC,74LVC126AD PHILIPS 14P SO R/TP
IC1650	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC1660	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC1665	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC1700	0IPW164200A	IC,PW164-20W 352P TBGA ST SCALER
IC1704	0IIC502000A	IC,ICS502MIT 8P SOIC ST PLL CLOCK
IC1705	0IIC501000A	IC,ICS 501MT 8P,SOP TP PLL CLOCK
IC1706	0IMP242560A	IC,24LC256-I/SM 8P,SOP TP 256K II
IC1707	0IDS170800A	IC,DS1708S 8P SOIC ST MICROMONITO
IC1708	0IPH743200A	IC,74HC32D 14SOP TP QUAD 2-INPUT
IC1709	0ISJ111725A	IC,EZ1117ACST-2.5 3P SOT ST REGUL
IC1710	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC1800	0IIN298003A	IC,COPY TE28F800B3TA90 48T50P BK
IC1802	0ISS616100C	IC,KM616V 1000BLT-7L 44, TSOP BK
IC1803	0IOK825522A	IC,MSM82C55A-2GS-2K 44P QFP ST CM
IC1805	0IMI623520B	IC,M62352GP 20P SSOP TP 8BITS 12C
IC1806	0IMI623520B	IC,M62352GP 20P SSOP TP 8BITS 12C
IC1808	0IMO324000C	IC,LM324D SO-14 TP OP AMP

LOCA. NO	PART NO	DESCRIPTION
IC1810	0IMCRKE004A	IC,KIA7427F, KEC SOT89-3P R/TP HI
IC1870	0IMCRSH001A	IC,PQ05DZ1U SHARP 5, SMD TYPE R/T
IC1871	0IPH740400G	IC,74HC04D HEX INVERTER 14P,SOP T
IC2001	0IMCRSB010A	IC,L3E07050K0A SEIKO EPSON 176QFP
IC2003	0IKE702700D	IC,KIA7027AF 3, SOT-89 TP RESET I
IC2005	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC2006	0ISJ111725A	IC,EZ1117ACST-2.5 3P SOT ST REGUL
IC2101	0IMCRSB008A	IC,L3E01031F0A SEIKO EPSON 48QFP
IC2103	0IMCRET001A	IC,EL2244CS ELANTEC 8P SO R/TP VI
IC2105	0IMO324000C	IC,LM324D SO-14 TP OP AMP
IC2110	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC2120	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC2129	0IMCRSH001A	IC,PQ05DZ1U SHARP 5, SMD TYPE R/T
IC2130	0IMCRKE008A	IC,KIA78D33F KEC 3P DPAK R/TP 3.3
IC2180	0IPRPSH001A	IC,PQ20WZ1U SHARP 5P SC63 R/TP LO
IC2201	0IMCRSB008A	IC,L3E01031F0A SEIKO EPSON 48QFP
IC2203	0IMCRET001A	IC,EL2244CS ELANTEC 8P SO R/TP VI
IC2205	0IMO324000C	IC,LM324D SO-14 TP OP AMP
IC2210	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC2220	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC2301	0IMCRSB008A	IC,L3E01031F0A SEIKO EPSON 48QFP
IC2303	0IMCRET001A	IC,EL2244CS ELANTEC 8P SO R/TP VI
IC2305	0IMO324000C	IC,LM324D SO-14 TP OP AMP
IC2310	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC2320	0IMCRSB009A	IC,L3E06070D0A SEIKO EPSON 48QFP
IC3002	0ISA715100D	IC,LA7151M 10SOP R/TP AUDIO SW FD
IC3005	0ISJ111733A	IC,EZ1117CST-3.3 3P,SOT-223 TP 3.
IC3006	0IFA741230A	IC,DM74LS123MX 16SOP TP DUAL RETR
IC3200	0IAL242110A	IC,AT24C21-10SI-2.5 8P,SOP TP 1K
IC3201	0IRH765700B	IC,BA7657F 24P,SOP TP INPUT SIG.
IC3202	0IRH765700B	IC,BA7657F 24P,SOP TP INPUT SIG.
IC3203	0IAD802300A	IC,AD8023AR 14P,SOP TP TRIPLE VID
IC3204	0IPH740400G	IC,74HC04D HEX INVERTER 14P,SOP T
IC3206	0IAL242110A	IC,AT24C21-10SI-2.5 8P,SOP TP 1K
IC3210	0IMCRPH018A	IC,74LVC126AD PHILIPS 14P SO R/TP
IC3280	0IAL895112B	IC,COPY AT89C51-24AC 40PIN TQFO T
IC3301	0IMCRMN002A	IC,MSP3400G QA B6 MICRONAS 80 QFP
IC3302	0IFA754207A	IC,KA75420ZTA(KA7542ZTA) 3P,TO-92
IC3361	0IKE455800E	IC,KIA4558 8DIP DUAL OP AMP
IC3501	0IMI623200B	IC,M62320FP,I/O EXPANDER 16P SOP
DIODE		
D650	0DD247109AA	DIODE,DETACTION 1S2471DETECT SW TP
D651	0DD247109AA	DIODE,DETACTION 1S2471DETECT SW TP
D801	0DD606000AA	DIODE,RECTIFIERS RBV606 NA 600V 6A 1
D810	0DD100009AM	DIODE,RECTIFIERS EU1ZV(1) TP SANKEN
D820	0DD100009AM	DIODE,RECTIFIERS EU1ZV(1) TP SANKEN
D821	0DD100009AM	DIODE,RECTIFIERS EU1ZV(1) TP SANKEN
D822	0DD100009AM	DIODE,RECTIFIERS EU1ZV(1) TP SANKEN
D832	0DR010000AA	DIODE,RECTIFIERS EG01C TP 1000V 0.5A 1
D833	0DD100009AM	DIODE,RECTIFIERS EU1ZV(1) TP SANKEN
D834	0DD260000BB	DIODE,RECTIFIERS BRIDGE D2SBA60(STK)
D841	0DD120000BB	DIODE,RECTIFIERS FML-G12S

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic	RD : Carbon Film
	CQ : Polyester	RS : Metal Oxide Film
	CE : Electrolytic	RN : Metal Film
		RF : Fusible

LOCA. NO	PART NO	DESCRIPTION
D845	0DD414809ED	DIODE,1N4148 TA
D851	0DR290000AA	DIODE,RECTIFIERS FMB-29L TO220 90V 8A
D852	0DR460009AA	DIODE,RECTIFIERS RK46 TP DO-214AC 60V 3.
D861	0DR290000AA	DIODE,RECTIFIERS FMB-29L TO220 90V 8A
D871	0DD120000BB	DIODE,RECTIFIERS FML-G12S
D881	0DD120000BB	DIODE,RECTIFIERS FML-G12S
D1201	0DD184009AA	DIODE,SWITCHING KDS184S 85V 300MA
D1520	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D1521	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D1522	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D1523	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D1524	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3100	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3101	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3102	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3103	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3104	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3105	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3106	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3107	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3108	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3109	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3110	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3111	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3112	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3113	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3114	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3115	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3116	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3130	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3131	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3163	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3164	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3165	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3280	0DD184009AA	DIODE,SWITCHING KDS184S CHIP 85V 300MA
D3281	0DD184009AA	DIODE,SWITCHING KDS184S CHIP 85V 300MA
D3282	0DD226239AA	DIODE,SWITCHING CHIP KDS226 SOT-23
D3283	0DD226239AA	DIODE,SWITCHING CHIP KDS226 SOT-23
D3284	0DD184009AA	DIODE,SWITCHING KDS184S CHIP 85V 300MA
D3285	0DD184009AA	DIODE,SWITCHING KDS184S CHIP 85V 300MA
D3301	0DZ620009BB	DIODE,ZENERS MTZJ6.2B TP ROHM-K DO34 0.5W
D3302	0DZ620009BB	DIODE,ZENERS MTZJ6.2B TP ROHM-K DO34 0.5W
D3371	0DZ820009AH	DIODE,ZENERS MTZJ8.2B TP ROHM-K DO34 - 8.2V
D3501	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3502	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3503	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3504	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3505	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
D3506	0DZRM00178A	DIODE,ZENERS UDZS TE-17 5.1B ROHM
LD3501	0DLLT0110AA	LED,LITEON LTL-1BEHJ-1 BK ORANGE/G
LD3502	0DLLT0110AA	LED,LITEON LTL-1BEHJ-1 BK ORANGE/G
LD3503	0DLLT0110AA	LED,LITEON LTL-1BEHJ-1 BK ORANGE/G

LOCA. NO	PART NO	DESCRIPTION
Q810	0DR260001AA	DIODE,RECTIFIERS FMG-26S ST SANKEN TO220 600V 6
ZD841	0DZ620009BB	DIODE,ZENERS MTZJ6.2B TP ROHM-K DO34 0.5W 6
ZD851	0DZ620009BB	DIODE,ZENERS MTZJ6.2B TP ROHM-K DO34 0.5W 6
TRANSISTOR		
IC3181	0TF492509AA	FET,SI4925DY TP TEMIC 30V 6.1A SO
Q650	0TR150400BA	TR,CHIP 2SA1504S(ASY) KEC
Q841	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q842	0TR322709AA	TR,KTC3227-Y,TP(KTC1627A),KEC
Q851	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q910	0TF283700AA	TR,FETS 2SK2837 BK TOSHIBA 500V 20A TO
Q1600	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q1601	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3018	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3019	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3020	0TR102009AG	TR,CHIP KRC102S KEC TP SOT-23 NA
Q3181	0TR150400BA	TR,CHIP 2SA1504S(ASY) KEC
Q3280	0TR150400BA	TR,CHIP 2SA1504S(ASY) KEC
Q3281	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3282	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3301	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3302	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3401	0TR102009AG	TR,CHIP KRC102S KEC TP SOT-23 NA
Q3402	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3403	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3404	0TR150400BA	TR,CHIP 2SA1504S(ASY) KEC
Q3405	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3406	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3407	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3408	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3409	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3410	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3411	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3412	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3501	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3502	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3503	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3504	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3505	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q3506	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
CAPACITOR		
C1	0CE476DF618	47UF STD 16V M FL TP5
C2	0CN1030F679	10000P 16V M Y TA52
C650	0CE107DH618	100UF STD 25V M FL TP5
C651	0CE106DF618	10UF STD 16V M FL TP5
C652	0CE106DF618	10UF STD 16V M FL TP5
C653	0CE106DF618	10UF STD 16V M FL TP5
C656	0CE107DH618	100UF STD 25V M FL TP5
C657	0CE106DF618	10UF STD 16V M FL TP5
C658	0CE107DH618	100UF STD 25V M FL TP5
C659	0CQ1042K439	0.1UF S 50V 5% M/PE NI TP5

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic CQ : Polyester CE : Electrolytic	RD : Carbon Film RS : Metal Oxide Film RN : Metal Film RF : Fusible
--	---	--

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
C661	0CQ1042K439	0.1UF S 50V 5% M/PE NI TP5	C1005	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C663	0CE108DK61A	1000UF STD 50V M FL TP7.5	C1016	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C664	0CE108BJ618	1000UF KME 35V M FL TP5	C1017	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C665	0CE108BJ618	1000UF KME 35V M FL TP5	C1018	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C666	0CE106DF618	10UF STD 16V M FL TP5	C1022	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C667	0CE337DF618	330UF STD 16V M FL TP5	C1032	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C702	0CE477DF618	470UF STD 16V 20% FL TP 5	C1033	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C704	0CE108BF618	1000UF KME 16V M FL TP5	C1046	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C721	0CE477DF618	470UF STD 16V 20% FL TP 5	C1048	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C723	0CE108BF618	1000UF KME 16V M FL TP5	C1064	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C801B	0CE106BK618	10UF KME 50V M FL TP5	C1066	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C801	0CQZVBK002B	A.C 275V 0.15UF K (S=22.5)	C1072	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C802	0CQZVBK002A	A.C 275V 0.1UF M (S=15)	C1074	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C804	0CF1050W470	1UF 0 500V 5% BULK M/PP NI	C1116	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C805	0CK10202510	1000P 2KV K B S	C1119	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C806	0CK10202510	1000P 2KV K B S	C1130	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C806	0CQZVBK002C	A.C 275V 0.22UF K (S=22.5)	C1136	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C807	0CK1020K515	1000P 50V K B TS	C1148	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C808	0CQ1021N519	0.001U 100V K POLY NI TP	C1151	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C809	181-007J	MPE ECQ-V1H564JL3(TR), 50V 0.5	C1155	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C814	0CE107BK618	100UF KME 50V M FL TP5	C1170	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C818	181-091R	R 1000PF 1KV 10%,-10% R/TP TP5	C1172	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C819	181-091Q	R 470PF 1KV 10%,-10% R/TP TP5	C1175	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C820	181-001K	CE 450V 220UF M LUG(105)	C1201	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C821	181-014Y	MPP 1.6KV 0.0015UF J	C1202	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C822	181-091R	R 1000PF 1KV 10%,-10% R/TP TP5	C1205	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C823	181-091R	R 1000PF 1KV 10%,-10% R/TP TP5	C1207	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C824	0CE227BK618	220UF KME 50V M FL TP5	C1221	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C825	0CE476BK618	47UF KME 50V M FL TP5	C1223	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C829	181-120K	2200PF 4KV M E FMTW LEAD 4.5	C1240	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C831	181-035N	DE1010 B KD 471M	C1247	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C833	0CE476BK618	47UF KME 50V M FL TP5	C1500	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C834	0CE476BK618	47UF KME 50V M FL TP5	C1520	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C835	181-010K	PP 0.01UF 630V 5% FM 7.5MM	C1533	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C836	0CE3366U650	33M SMS 400V M FM7.5	C1535	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C837	0CK1030K945	0.01UF 50V Z F TR	C1537	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C841	0CE108BF618	1000UF KME 16V M FL TP5	C1539	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C842	0CE107BF618	100UF KME 16V M FL TP5	C1541	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C843	0CK1040K945	0.1UF 50V Z F TR	C1543	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C845	0CE476BK618	47UF KME 50V M FL TP5	C1545	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C852	0CE228BK650	2200UF KME TYPE 50V 20% FM7.5	C1557	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C853	0CE108BF618	1000UF KME 16V M FL TP5	C1568	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C855	0CE228BF618	2200UF KME 16V M FL TP5	C1569	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C856	0CK1040K945	0.1UF 50V Z F TR	C1580	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C862	0CE228BK650	2200UF KME TYPE 50V 20% FM7.5	C1581	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C863	0CE108BF618	1000UF KME 16V M FL TP5	C1583	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C871	181-091Q	R 470PF 1KV 10%,-10% R/TP TP5	C1585	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C873	0CE228BK650	2200UF KME TYPE 50V 20% FM7.5	C1586	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C876	0CE477BK618	470UF KME TYPE 50V 20% FL TP 5	C1587	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C881	0CE477BJ618	470UF KME TYPE 35V 20% FL TP 5	C1589	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C883	0CE227BK618	220UF KME 50V M FL TP5	C1590	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1003	0CE476SF6DC	47UF MVG 16V M SMD R/TP	C1591	0CE336SH6DC	33UF MVG 25V M SMD R/TP

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic	RD : Carbon Film
	CQ : Polyester	RS : Metal Oxide Film
	CE : Electrolytic	RN : Metal Film
		RF : Fusible

LOCA. NO	PART NO	DESCRIPTION
C1593	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1594	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1601	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1602	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1609	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1616	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1631	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1632	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1633	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1635	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1648	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1681	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1683	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1691	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1693	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1695	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1697	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1709	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1710	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C1711	0CK224DF56A	220000PF 2012 16V 10% R/TP X7R
C1715	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1716	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1718	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1719	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1747	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1750	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1760	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1815	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1822	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1823	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1824	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1851	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1861	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1880	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C1882	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C1884	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C2005	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2015	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2090	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2091	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2092	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2101	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2102	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2103	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2104	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2111	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2113	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C2122	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2127	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2146	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2167	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2175	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD

LOCA. NO	PART NO	DESCRIPTION
C2184	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2186	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2188	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2192	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C2193	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C2194	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C2195	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C2198	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C2201	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2202	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2203	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2204	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2211	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2216	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C2222	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2226	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2234	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2248	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2260	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2267	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2311	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2319	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2322	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C2332	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2343	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2363	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2380	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2386	0CE476VH6DC	47UF MV 25V 20% R/TP(SMD) SMD
C2390	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2391	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2392	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C2393	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3047	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3048	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3049	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3050	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3053	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3054	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3061	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3063	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3066	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3100	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3101	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3102	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3183	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3200	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3206	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3208	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C3210	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C3212	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C3214	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C3216	0CE106SH6DC	10UF MVG 25V M SMD R/TP

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic CQ : Polyester CE : Electrolytic	RD : Carbon Film RS : Metal Oxide Film RN : Metal Film RF : Fusible
--	---	--

LOCA. NO	PART NO	DESCRIPTION
C3218	0CE106SH6DC	10UF MVG 25V M SMD R/TP
C3221	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3223	0CE336SH6DC	33UF MVG 25V M SMD R/TP
C3226	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3234	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3250	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3252	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3254	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3256	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3258	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3260	0CN106KH67A	10UF 4532 25V 20% R/TP X5R
C3282	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3305	0CE335SK6DC	3.3UF MVG 50V 20% SMD R/TP
C3310	0CE335SK6DC	3.3UF MVG 50V 20% SMD R/TP
C3316	0CE335SK6DC	3.3UF MVG 50V 20% SMD R/TP
C3318	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3321	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3324	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3326	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3331	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3332	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3333	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3351	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3353	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3355	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3357	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3358	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3361	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3366	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3369	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3372	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3374	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3375	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3404	0CE106SF6DC	10UF MVG 16V 20% R/TP(SMD) SMD
C3408	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3411	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3414	0CE476SF6DC	47UF MVG 16V M SMD R/TP
C3418	0CE107SF6DC	100UF MVG 16V M SMD R/TP
C3420	0CE105SK6DC	1UF MVG 50V M SMD R/TP
C3501	0CE476SF6DC	47UF MVG 16V M SMD R/TP
COIL & TRANSFORMER		
L1	0LA0102K119	INDUCTOR,10UH K 2.3*3.4 TP
L841	150-C02F	COIL,82UH
L851	150-C02F	COIL,82UH
L852	6170VZ0005A	TRANSFORMER,H-DRIVER IRON-15 120UH LM2576
L861	150-C02F	COIL,CHOKE 82UH PHY TURN
L871	150-C02F	COIL,CHOKE 82UH PHY TURN
L881	150-C02F	COIL,CHOKE 82UH PHY TURN
L1010	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1101	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1208	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH

LOCA. NO	PART NO	DESCRIPTION
L1555	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1603	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1604	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1630	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1690	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1691	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1703	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1704	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1750	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1751	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1752	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1753	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1800	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1820	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2011	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2107	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2150	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2203	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2205	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2207	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2302	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2305	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2306	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L2350	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3200	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3203	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3206	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3280	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3401	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L3406	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
T801	6170VMCA03B	TRANSFORMER,SMPS EER4942 1200UH STR-F6668
T810	6170VMCA37B	TRANSFORMER,SMPS PQ3535 310UH MC33262
T830	6170VS0001B	TRANSFORMER,STAND-BY EE1927 2200UH
JACK		
P1501A	6612BBBHN6A	JACK,DIN 440062-1 AMP DVI INTERACED RIG
P3104A	6612VMH003A	JACK,SCART 36510-0032 MOLEX 48PIN PITCH2.
P3132A	6612VMH003A	JACK,SCART 36510-0032 MOLEX 48PIN PITCH2.
P3133	6612BBBHN6A	JACK,DIN 440062-1 AMP DVI INTERACED RIG
P3134	6612BBBHN6A	JACK,DIN 440062-1 AMP DVI INTERACED RIG
P3161	380-342B	JACK,PHONE HTJ-064-04A KUNMING STEREO MW6
P3162	380-336G	JACK,RCA WA6013-32-40 PARK ELEC. A/V 1P
P3163	380-363J	JACK,DIN PJ6046F PARKELEC H=8.0 W/O S/W
P3165	6613V00015C	JACK ASSY,S457G IT:2200KA0007A GOLD 3*2(
P3166	6612TAH002A	JACK,PHONE DC-001 UNITOP DC-001 2.0MM
CONNECTOR		
P005A	387-A03E	CONNECTOR ASSY,3P (L=300)
P100	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P601	366-932B	CONNECTOR (CIRC),2.5MM 3P GIL-G
P602	366-932C	CONNECTOR (CIRC),2.5MM 4P GIL-G
P701B	366-932D	CONNECTOR (CIRC),2.5MM 5P GIL-G

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic CQ : Polyester CE : Electrolytic	RD : Carbon Film RS : Metal Oxide Film RN : Metal Film RF : Fusible
--	---	--

LOCA. NO	PART NO	DESCRIPTION
P801B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P801C	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P801B	366-932C	CONNECTOR (CIRC),2.5MM 4P G
P802A	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P802B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P802C	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P802B	366-932B	CONNECTOR (CIRC),2.5MM 3P G
P803A	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P803B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P803B	366-932B	CONNECTOR (CIRC),2.5MM 3P G
P804A	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P804B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P805A	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P805B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P806A	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P806B	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P810	6602V39002A	CONNECTOR (CIRC),3.96MM 2P YW396-03AV
P815	366-932C	CONNECTOR (CIRC),2.5MM 4P G
P820A	366-932E	CONNECTOR (CIRC),2.5MM 6P G
P821	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P821A	366-921L	CONNECTOR (CIRC),2.5MM 12P
P822	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P822A	366-932D	CONNECTOR (CIRC),2.5MM 5P G
P841	366-921F	CONNECTOR (CIRC),2.5MM 7P G
P845	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P846	366-009D	CONNECTOR (CIRC),2.36PAI 1P
P1201	366-932E	CONNECTOR (CIRC),2.5MM 6P G
P1500A	6602V12002B	CONNECTOR (CIRC),1.25MM 21P
P1500B	6602V12002B	CONNECTOR (CIRC),1.25MM 21P
P1504	366-921L	CONNECTOR (CIRC),2.5MM 12P
P1506	366-921F	CONNECTOR (CIRC),2.5MM 7P
P1507A	6602V12001H	CONNECTOR (CIRC),1.25MM 12PINP
P1508	6602V12001B	CONNECTOR (CIRC),1.25MM 3P 53261-0390
P1509	6602V12001D	CONNECTOR (CIRC),1.25MM 10P 53261-1090
P1510	6602V12001B	CONNECTOR (CIRC),1.25MM 3P 53261-0390
P1511	6602V12001A	CONNECTOR (CIRC),1.25MM 2P 53261-0290
P1512	6602V12001B	CONNECTOR (CIRC),1.25MM 3P 53261-0390
P1520	6602V12001A	CONNECTOR (CIRC),1.25MM 2P 53261-0290
P1521	366-921E	CONNECTOR (CIRC),2.5MM 6P GIL-G
P1522	366-921B	CONNECTOR (CIRC),2.5MM 3P GIL-G
P1550A	6602V12002B	CONNECTOR (CIRC),1.25MM 21P GT121
P1550B	6602V12002B	CONNECTOR (CIRC),1.25MM 21P GT121
P1802	6602T10002D	CONNECTOR (CIRC),ETC 50P FH12-50S-0.5H
P2001	6602T10002D	CONNECTOR (CIRC),ETC 50P FH12-50S-0.5H
P2101	6630VZS001C	CONNECTOR(CIRC),DRAWING 54104-3692 36PIN
P2201	6630VZS001C	CONNECTOR(CIRC),DRAWING 54104-3692 36PIN
P2301	6630VZS001C	CONNECTOR(CIRC),DRAWING 54104-3692 36PIN
P3100	6630VGA001C	CONNECTOR,D-SUB 68114-1521 15PIN 2.29MM
P3101	6630VGA001C	CONNECTOR,D-SUB 68114-1521 15PIN 2.29MM
P3102	6630VGA001C	CONNECTOR,D-SUB 68114-1521 15PIN 2.29MM
P3104	6932V25004A	CONNECTOR,HOUSING 36512-0098 48 2.54
P3130	6630VGA004A	CONNECTOR,D-SUB 68107-0922 9PIN 2.77MM A

LOCA. NO	PART NO	DESCRIPTION
P3132B	6932V25004A	CONNECTOR,HOUSING 36512-0098 48 2.54
P3160B	6602V12001H	CONNECTOR,1.25MM 12PINP 53261-1290 JPN-M
P3160A	6602V12001H	CONNECTOR,1.25MM 12PINP 53261-1290 JPN-M
P3171	6602V12001G	CONNECTOR,1.25MM 8PINP 53261-0890 JPN-MO
P3341	366-932B	CONNECTOR,2.5MM 3P GIL-G LG CABLE S (STI
P3381	6602V12001G	CONNECTOR,1.25MM 8PINP 53261-0890 JPN-MO
P3501	6630VA00512	CONNECTOR,52745-1290 MOLEX 12P 0.5MM FPC
P3511	6602V20005L	CONNECTOR,2.0MM 12P GIL-S LG CABLE STRAI
P3512	6630VA00512	CONNECTOR,52745-1290 MOLEX 12P 0.5MM FPC
P3513	366-932B	CONNECTOR,2.5MM 3P GIL-G LG CABLE S
RESISTOR		
D812	0RD0302F609	30 OHM 1/6 W 5.00% TA52
R656	0RD0221H609	2.2 OHM 1/2 W 5.00% TA52
R658	0RD0221H609	2.2 OHM 1/2 W 5.00% TA52
R705	0RS3301K607	3.3K OHM 2 W 5.00% TA62
R706	0RS3301K607	3.3K OHM 2 W 5.00% TA62
R801B	0RD1801F609	1.8K OHM 1/6 W 5.00% TA52
R801	0RD4703H609	470K OHM 1/2 W 5.00% TA52
R802B	0RD3301F609	3.3K OHM 1/6 W 5.00% TA52
R803B	0RD0562H609	56 OHM 1/2 W 5.00% TA52
R803	0RN3903F409	390K 1/6W 1% TA52
R805B	0RD4700F609	470 OHM 1/6 W 5.00% TA52
R805	0RN3303F409	330K OHM 1/6 W 1.00% TA52
R806	0RN3903F409	390K 1/6W 1% TA52
R807	0RN3903F409	390K 1/6W 1% TA52
R808	0RS1802K607	18K OHM 2 W 5.00% TA62
R809	0RD0302F609	30 OHM 1/6 W 5.00% TA52
R810	0RD0562H609	56 OHM 1/2 W 5.00% TA52
R811	180-A01B	RW ROUND G 2W 0.11 K TA31(63)
R812	0RN3903F409	390K 1/6W 1% TA52
R813	0RN3903F409	390K 1/6W 1% TA52
R814	0RN3903F409	390K 1/6W 1% TA52
R815	0RD1203F609	120K OHM 1/6 W 5.00% TA52
R816	0RD2202F609	22K OHM 1/6 W 5.00% TA52
R817	0RD1202F609	12K OHM 1/6 W 5.00% TA52
R818	0RD2200F609	220 OHM 1/6 W 5.00% TA52
R819	0RN1002F409	10K OHM 1/6 W 1.00% TA52
R820	0RN1002F409	10K OHM 1/6 W 1.00% TA52
R821	180-A01M	0.22 OHM 2 W 5% TA62 RW ROUND
R822	0RD1001F609	1K OHM 1/6 W 5.00% TA52
R823	0RD2701F609	2.7K OHM 1/6 W 5.00% TA52
R825	0RD4701F609	4.7K OHM 1/6 W 5.00% TA52
R826	0RS2202K607	22K OHM 2 W 5.00% TA62
R827	0RS2202K607	22K OHM 2 W 5.00% TA62
R829	0RKZVTA001D	10M OHM 1/2 W 5% TA52 UL PILKO
R830	0RS1802K607	18K OHM 2 W 5.00% TA62
R832	0RS4702K607	47K OHM 2 W 5.00% TA62
R833	0RS0161K607	1.6 OHM 2 W 5.00% TA62
R834	0RS1203K607	120K OHM 2 W 5.00% TA62
R835	0RF0221H609	2.2 OHM 1/2 W 5.00% TA52
R836	0RD1502F609	15K OHM 1/6 W 5.00% TA52

LOCA. NO	PART NO	DESCRIPTION
R840	0RD1601F609	1.6K OHM 1/6 W 5.00% TA52
R841	0RD1501F609	1.5K OHM 1/6 W 5.00% TA52
R842	0RD3001F609	3K OHM 1/6 W 5.00% TA52
R843	0RD2701F609	2.7K OHM 1/6 W 5.00% TA52
R844	0RD3601F609	3.6K OHM 1/6 W 5.00% TA52
R845	0RD4701F609	4.7K OHM 1/6 W 5.00% TA52
R851	0RD2401F609	2.4K OHM 1/6 W 5.00% TA52
R852	0RD1501F609	1.5K OHM 1/6 W 5.00% TA52
R853	0RD3601F609	3.6K OHM 1/6 W 5.00% TA52
R854	0RD2701F609	2.7K OHM 1/6 W 5.00% TA52
R855	0RD1601F609	1.6K OHM 1/6 W 5.00% TA52
R857	0RD8200F609	820 OHM 1/6 W 5.00% TA52
R871	0RD1002H609	10K OHM 1/2 W 5.00% TA52
RA1101	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1102	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1103	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1104	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1105	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1106	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1107	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1108	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1109	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1110	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1600	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1601	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1611	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1612	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1613	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1614	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1615	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1616	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1617	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1618	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1619	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1620	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1621	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1622	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1631	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1632	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1633	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1634	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1635	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1636	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1637	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1638	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1639	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1640	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1641	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1642	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OH
RA1700	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1701	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1702	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4

LOCA. NO	PART NO	DESCRIPTION
RA1703	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1704	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP 4
RA1705	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1706	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1707	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1708	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1709	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1710	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1711	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1712	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1713	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1714	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1715	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1800	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1801	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1802	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1803	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1804	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1805	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1806	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA1807	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2001	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2003	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2004	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2006	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2007	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2010	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2011	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2013	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2014	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2016	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2017	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2018	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2019	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2020	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2025	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2030	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2031	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
RA2032	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00% R/T
SWITCH		
SW801	140-289A	SWITCH,PUSH POWER SDDF3PASP013
SW1700	6600VR1004A	SWITCH,TACT SKHMPW 5P CHIP J-ALPS NON
SW1701	6600VR1004A	SWITCH,TACT SKHMPW 5P CHIP J-ALPS NON
SW3501	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3502	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3503	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3504	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3505	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3506	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON
SW3507	140-313B	SWITCH,TACT 2LEAD 160G(TA) LG C&D NON

LOCA. NO	PART NO	DESCRIPTION
FILTER & CRYSTAL		
FB820	125-022K	FILTER,FERRITE 1UH TAPING
FB821	125-022K	FILTER,FERRITE 1UH TAPING
FB822	125-022K	FILTER,FERRITE 1UH TAPING
FB861	125-022K	FILTER,FERRITE 1UH TAPING
FB871	125-123A	FILTER,FERRITE BFD3565R2F(TAPING)
FB872	125-022K	FILTER,FERRITE 1UH TAPING
L801	150-F06T	FILTER,SQE3535 20MH PHY TURN
L802	150-F06T	FILTER,SQE3535 20MH PHY TURN
L803	150-F06T	FILTER,SQE3535 20MH PHY TURN
L804	150-F06T	FILTER,SQE3535 20MH PHY TURN
L1011	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1109	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1110	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1111	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1112	6200VJT001B	FILTER,BMK800 NIIGATA 50VOLT 1A REEL
L1201	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1202	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1505	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1521	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1522	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1523	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1524	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1525	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1526	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1527	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1528	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1529	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1530	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1550	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1551	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1552	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1553	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1554	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1556	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1560	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1561	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1562	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1563	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1564	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1565	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1566	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1567	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1568	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1569	6200VJT001B	FILTER,BMK800 NIIGATA 50VOLT 1A REEL
L1570	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1571	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1572	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1573	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1574	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1575	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P

LOCA. NO	PART NO	DESCRIPTION
L1576	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L1577	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1578	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1579	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1600	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1601	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1602	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1605	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1606	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L1740	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L1821	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L2010	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L2060	6200VJT001A	FILTER,BMK400 TA NIIGATA 50VOLT 1A RE
L2061	6200VJT001A	FILTER,BMK400 TA NIIGATA 50VOLT 1A RE
L2062	6200VJT001A	FILTER,BMK400 TA NIIGATA 50VOLT 1A RE
L2103	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L2105	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L2250	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3007	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3008	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3131	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L3132	6200VJT001C	FILTER,BMK351 NIIGATA 50VOLT 1A 340P
L3201	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3202	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3204	6210TCE001G	FILTER,HH-1M3216-501 CERATEC 3216MM R
L3341	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L3342	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L3343	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L3344	6200VJT004B	FILTER,NFM41PC204F1H3L NFM4516P13C204
L3402	6210TCT002B	FILTER,ACB2012M-300-T TDK
L3403	6210TCT002B	FILTER,ACB2012M-300-T TDK
L3404	6210TCT002B	FILTER,ACB2012M-300-T TDK
X1001	6202VDT002E	RESONATOR,CRYSTAL SX-1SMD SUNNY RADIAL
X1700	6202VDT002H	RESONATOR,CRYSTAL SX-1 SUNNY 18.432000MHZ
X3280	6202VDT002A	RESONATOR,CRYSTAL SX-1SMD SUNNY RADIAL 12.0MHZ
X3301	6202VDT002H	RESONATOR,CRYSTAL SX-1 SUNNY 18.432000MHZ
ACCESSORIES		
A1	3828VA0349A	MANUAL,OWNERS RE01JB MW-60SZ12 LG EN
A2	6710V00086C	REMOTE CONTROLLER RE-01JB,LASER,MW-60SZ12
MISCELLANEOUS		
CA1	6851V00006A	CABLE ASSEMBLY,DIN 13P TO MD 4P 1830MM
CA2	6851V00006B	CABLE ASSEMBLY,DIN 13P TO MD 6P 1830MM
CON	6866VA9001A	CONNECTOR,D-SUB 2990-9C,AT,L1830,COOL GRAY 3C
F800	0FT5001B51B	FUSE,SLOW BLOW 5000MA 250 V 5.2X20 CY/GL KS
RL831	141-018E	RELAY,DG12D1
NTC801	163-048D	THERMISTOR,KL15L2R5 +/- 15% 125V
NTC802	163-048D	THERMISTOR,KL15L2R5 +/- 15% 125V
PA1	6726VH0001A	REMOTE CONTROLLER RECEIVER 38KHZ .
VA800	164-003D	VARISTOR,SVC561D-14A ILJIN 560V 10% UL/

